

The MANUFACTURING CONFECTIONER

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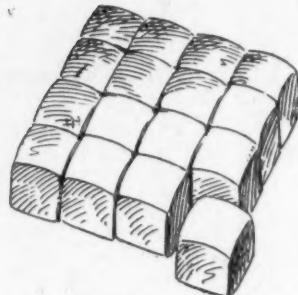
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Announcing the
Most Outstanding
Improvement in
Food Coloring
Technique ever
made!



One square gives a desirable shade to
a 35-lb. batch. Each Pound contains
eight (8) 2-oz. Cakes, as pictured
above. The small squares easily break
off without soiling the fingers.

**100% Perfect
Self-Measuring
Eliminates All Guess
Work
No Waste, Therefore
Economical
Easily Distributed**

REPORTS FROM OLD CUSTOMERS WHO
HAVE BEEN MAKING THEIR OWN PASTE
COLORS

"In reply to yours of the 10th,
we beg to advise that the Plastic
Red which you shipped us recently
worked up very well and we expect
to adopt this form of coloring."

"Sample of Red Color received
for which accept our thanks.
Quality is very fine and gives
satisfaction. You will hear from
us in the near future."

"We are returning to you a pound
of powdered Green Color in order
that we may standardize on the
Plastic cubes immediately. Thanks
for your cooperation in calling
this excellent product to our
attention."

Many other manufacturers who
have been making up their Paste
Colors have adopted the ATLAS
PLASTIC FOOD COLORS.

H. Kohnstamm & Co., Inc.

New York
83-93 Park Place



Chicago
11-13 E. Illinois St.

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The Manufacturing Confectioner's Approved Advertising of Confectioners' Machinery and Supplies

and Miscellaneous Advertising Directed to Manufacturing Confectioners

POLICY: THE MANUFACTURING CONFECTIONER is essentially a manufacturers' publication and therefore is a logical advertising medium only for confectioners' supplies and equipment. The advertising pages of THE MANUFACTURING CONFECTIONER are open only for messages regarding reputable products or propositions of which the manufacturers of confectionery and chocolate are logical buyers.

This policy EXCLUDES advertising directed to the distributors of confectionery, the soda fountain and ice cream trade. The advertisements in THE MANUFACTURING CONFECTIONER are presented herewith with our recommendation. The machinery equipment and supplies advertised in this magazine, to the best of our knowledge, possess merit worthy of your careful consideration.

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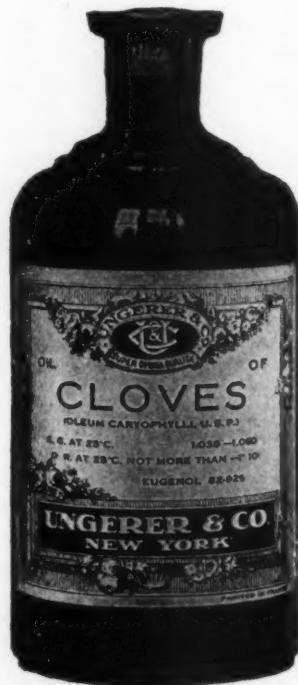
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The Significance of a Label

UNGERER labels carry as full and complete chemical and physical specifications of the products sold under them as is practical. The label is a guarantee that the product meets those specifications and further that it is pure and of the finest quality.

That the House of Ungerer has the confidence of the largest purchasers of essential oils, perfume and flavoring materials is tacit recognition of their high standing and signifies definite approval of their policy of uncompromising maintenance of quality.



"Our Quality Is Always Higher Than Our Price"

UNGERER & CO.
NEW YORK

Chicago Branch: 350 N. Clark Street

Why Not The Best?

Hard Butters
For
Coatings
Caramels, etc.

Plastic Butters
For
Fillers

Coconut Oil
For
Nut Salting



BRAND

“Purposely Good”

Made up to a Standard
Not
Down to a Price

*Complete warehouse stocks maintained at
principal distributing centers*

Durkee Famous Foods, Inc.,
formerly
The Glidden Food Products Co.

Chicago Office
2670 ELSTON AVENUE



New York Office
82 CORONA AVE.
Elmhurst, L. I.

Co-operating with the Biscuit and Cracker Manufacturers Company

FRUIT FILLED CHOCOLATES

FOR YOUR FRUIT BOX or FRUIT and NUT ASSORTMENT

Fruits in your candies will make them a more balanced diet by combining fruit vitamines and fruit acids with the sugar and chocolate, thus making not only a delicious confection, but one containing all the principal elements of a well-balanced diet, carbohydrates, fats, acids, proteins, and vitamines.

Your trade will surely like
CORDIAL FRUIT CHOCOLATES
containing

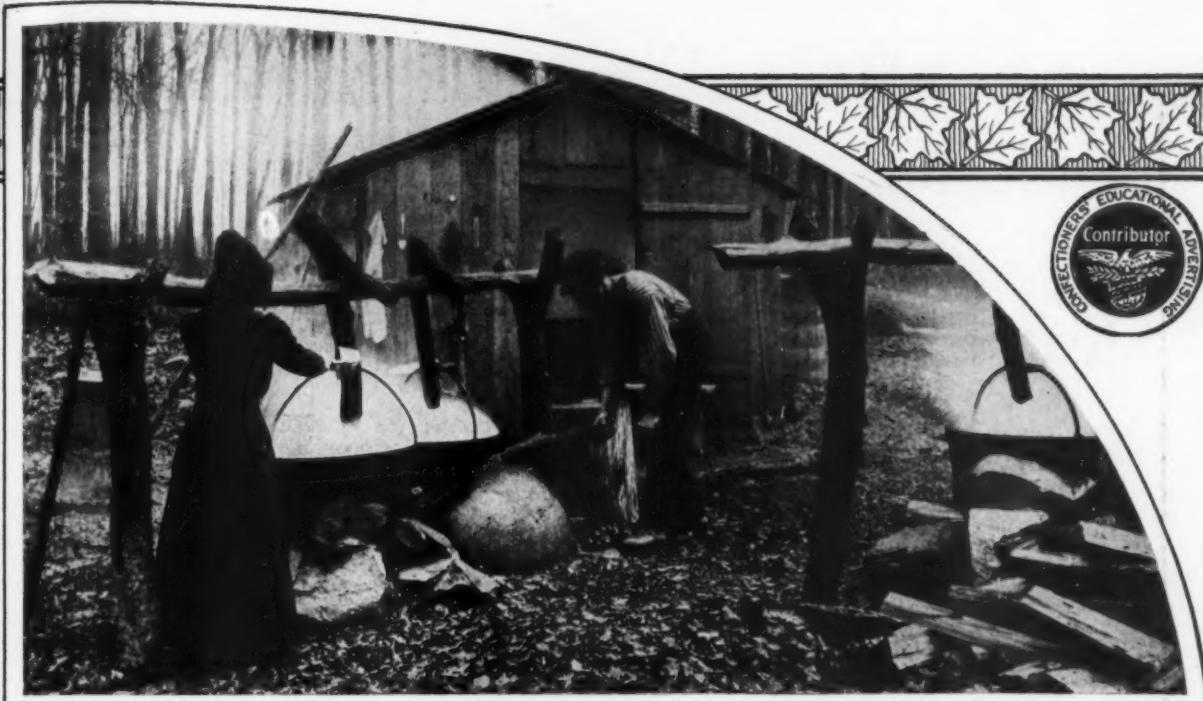
BLANKE-BAER

- PINEAPPLE CUBES
- PINEAPPLE WEDGES
- PINEAPPLE PRISMS
- DIPPING STRAWBERRIES
- DIPPING KUMQUATS
- DIPPING RAISINS
- DIPPING PRUNE PIECES
- DIPPING CHERRIES
- DIPPING PEACH CUBES



**SPECIAL CONTRACT PRICES
ON QUANTITY ORDERS**

BLANKE-BAER EXTRACT & PRESERVING COMPANY
3244 SOUTH KING'S HIGHWAY, ST. LOUIS, MO.



TRUE MAPLE FLAVOR

CONCENTRATION	Sixty-fold makes for
CONVENIENCE and ECONOMY	in handling, storage, transportation and use. No excess bulk.
SOLUBILITY	in water, Glycerine and Syrup simplifies introduction into any product. No grinding required.
STABILITY	It will not deteriorate like Maple Syrup—no molding or spoilage of any kind—It's always fresh.
GENUINENESS	guaranteed — flavor and color strictly natural. All labeling troubles eliminated.
IT IS NOT AN IMITATION	

DO you utilize its delicious appeal in your candies?

Maple sugar is *inconvenient* and *bothersome* to use—it must be broken up and dissolved and due allowance made in your formula for the added bulk of unwanted sugar. In spite of this, six million pounds of maple sugar consumed each year attest the popularity and drawing power of this delicious flavor. Our—

FRITZBRO TRUE MAPLE CONCENTRATE

extracted from finest pure maple syrup supplies this in convenient sixty times concentrated liquid form. It is as simple to use as Vanilla or any other extract. You simply measure it from the bottle into your *stock fondant* in proportion of three to five ounces to the hundred pounds. It is more economical than maple sugar too.

Many leaders in the confectionery industry are using it regularly and with increasing satisfaction.

May we not send sample and submit details to you?

Fritzsche Brothers, Inc.

CHICAGO
118 West Ohio St.

NEW YORK
78-84 Beekman St.

TORONTO
93-95 Church St.



KELLOGG'S EXACTING METHODS ASSURE QUALITY

KEPPING qualities of edible coconut oil products depend upon:

- (1) Cleanliness
- (2) Care in the initial airing and processing of the copra

In the Kellogg coconut oil plant at Manila, the oil is very carefully expressed at a low temperature. A light colored oil of a pleasing taste and low acid value is obtained. After double filtration, the oil is kept free from dirt and rancidity-developing bacteria.

Such careful and exacting methods assure users of Kellogg's Coconut Butter and Oils unexcelled keeping and tasting qualities.

SPENCER KELLOGG AND SONS SALES CORP'N

KELLKO
COCONUT
HARD BUTTERS

KELLOLEIN
COCONUT
SOFT BUTTERS



KELLOGG
HYDROGENATED COCONUT
OILS AND PLASTIC BUTTERS

KOLINE
(76° EDIBLE COCONUT OIL)

Spencer Kellogg and Sons Administration Office and Research Laboratories are located at Buffalo, N. Y. Mills at Manila, P. I., Buffalo, New York City, Chicago, St. Paul, Minneapolis, Superior. Warehouses at Atlanta, Baltimore, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Columbus, Detroit, Fort Wayne, Indianapolis, Kansas City, Los Angeles, Milwaukee, Minneapolis, New York City, Philadelphia, Pittsburgh, St. Louis, San Francisco.



Pure LICORICE candies make attractive displays and prove big sellers ~

AN attractive display of licorice confections is a real attention-getter—a decided asset as a sales-maker.

The public is clamoring for *natural* flavors. And genuine licorice fills a long felt need for a flavor that offers unusual possibilities for new numbers.

Pure licorice, as provided in MAFCO Licorice Syrup, has brought this traditional "penny goods flavor" into the forefront of flavors for the finest confections. Licorice confections are eagerly sought today—as delightfully tasty candy and as real health-food, which is good for the throat and good for the stomach.

Many confectioners are attracting new trade by adding unique licorice confections to their present assortments. The convenience of the syrup form makes it easy to mix up a batch. Try a batch or two yourself, using

MAFCO Licorice Syrup

MACANDREWS & FORBES COMPANY
200 FIFTH AVENUE, NEW YORK

Gentlemen:
Please send us a copy of your new book, "History
of Licorice," together with your folio of Licorice
Recipes.

NAME.....
ADDRESS.....
CITY..... STATE.....

CLIP AND MAIL TODAY

MC-12

Write for Licorice Formulas

ALL BLACK

Licorice Caramels, wrapped or unwrapped.
Licorice Jelly Gum Drops.
Licorice Pastilles.
Licorice Caramel-nougat bon-bon center.
Licorice Centers for Cordials, panned goods, etc.
Licorice Turkish Paste.

BLACK AND WHITE

Licorice and Marshmallow Caramels.
Licorice-filled Hard Candies (silver gloss jacket with black stripe).
Licorice solid Hard Candy (with white stripe).
Licorice Caramel-nougat rolls.



Wrought *in* Gold

THE confectioner who attempts to economize by substituting inferior flavor for that of known quality is like the goldsmith who undertakes to express his art in pewter or brass.

In the use of a baser metal there is an obvious admission that the creation is not worthy of the most precious of all mediums for expressing the goldsmith's art.

By the same token, the confectioner who neglects to avail him-

self of the finest flavors that experience and skill have been able to make science yield, commits himself on the mediocrity of his product.

For 45 years the staff of Foote & Jenks has given the best of its skill and experience to the production of finer flavors—flavors that are available to any confectioner who prides himself on a finished product distinctly above the average.

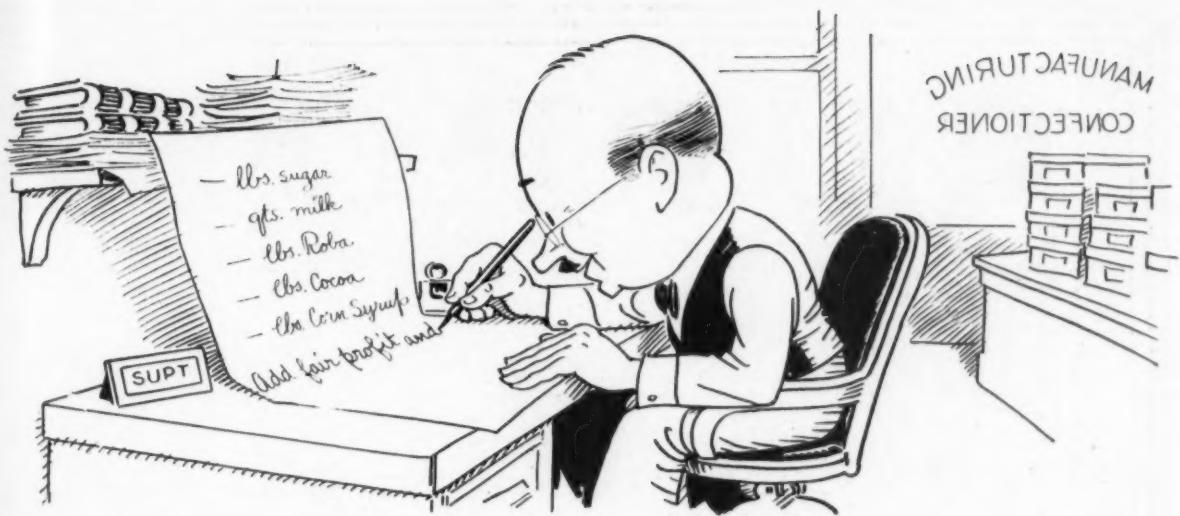
FOOTE & JENKS, JACKSON, MICHIGAN

FOOTE & JENKS'
"ISOLATES"
 VANILLA . . . LEMON . . . ORANGE and 12 others

THIS Company approaches a half century of specialization in the task of developing and perfecting terpeneless, super concentrated, water soluble flavors. Our entire time and attention are devoted to the manufacture of SOLUBLE Concentrates—to research work, scientific control, and the constant testing of our products in various forms of foods. It will be to your definite advantage to avail yourself of this specialized service.



The INDISPENSABLE INGREDIENT
scientifically developed flavors!



PROFIT—*write this most important ingredient into your candy formulas*

Candy made after the finest formula you ever devised would taste mighty bitter to you if it could not be sold at a fair profit.

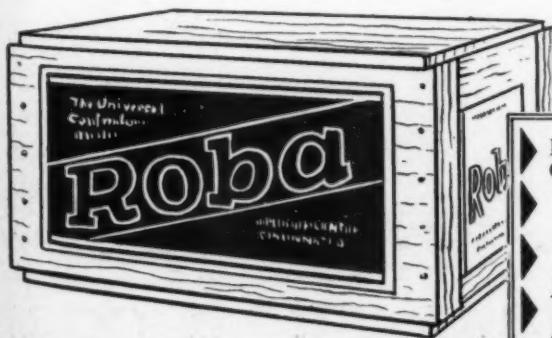
In the end, the biggest profits come from using ingredients whose quality is above question, and unvarying. Such ingredients make your results surer. Your product today is quite as good as that which you produce tomorrow. You need never worry about its salability.

In choosing Roba, for example, you gain this uniformity because Roba is a confectioners' hard butter of uniformly high quality. Every step in the manufacture

and refinement of Roba is conducted under the most rigid scientific control. Roba is bland and neutral—it cannot interfere with the true taste of your most delicately flavored goods.

Use Roba for many purposes—coatings, caramels, nougats, scotches, toffees, kisses and chewing candies. Because of its uniform quality goods made with Roba stand up under extremely trying conditions; they have unusually sharp fracture and decided snap; they are more surely salable and profitable.

Let your own chemists test Roba in your favorite formulas. Let Roba's results demonstrate what a dependable, profitable ingredient it is.



**Mail this coupon for
Free Sample of Roba**

PROCTER & GAMBLE
Cincinnati, Ohio

PROCTER & GAMBLE (Roba Dept. Desk 12-B)
Gwynne Bldg., Cincinnati, Ohio.

Please send me a free test sample
of Roba
Specify $\frac{1}{2}$ melting point desired.

Name.....

Firm Name.....

Business Address.....

City..... State.....

SUPPOSE

W

OULD it be less wholesome, less healthful or less useful to you for the many purposes which Cerelose serves best? Would you use *less* or *more* of this great, non-cloying health sweet, if the relative prices of Cerelose and ordinary sugar were reversed?

Cerelose is low priced because it is the product of America's largest agricultural crop. All of the corn from which Cerelose is made comes from American farms—with not one cent of duty to pay. It is your good fortune that the newest and most healthful of sweets is *also* the least expensive.

Many confectioners have already modernized their formulas just as they have modernized their factories—with the aid of Cerelose. But Cerelose, old as the hills in Nature, is a new tool in Industry. When others understand what every doctor knows about the health and dietetic aspects of Cerelose, they will use more of it in

Cerelose

PURE WHITE SUGAR FROM CORN

E CEREOSE

(REFINED DEXTROSE)

Were 10c per Pound!

their formulas—as much as the physical constants of the respective batches will permit—and be proud of it.

Running currently in the Manufacturing Confectioner is a series of remarkable articles on the Confectionery Uses of Refined Dextrose by John M. Krno, Chief Chemist of the Corn Products Refining Company. The dextrose used in the new dextrose formulas gotten up for you by the Experimental Candy Factory at Edgewater—is *Cerelose*, product of Corn Products Refining Company. Supervising the practical operations of the Cerelose Candy Factory at Edgewater is a candymaker of international reputation—Mr. Adolph Schildtberger, formerly of Stollwerck (Vienna), Einem (Moscow) and Happiness (New York). These men have a message to bring to you with regard to the texture, flavor and keeping quality of candies made with Cerelose. Write now for the new Cerelose formulas—

Cerelose is refined dextrose—the vital fuel which fires the human engine. Many systems unable to tolerate the more complex sugars, handle Cerelose easily. Doctors call it "the new staff of life." It is the fuel-sugar of the famous Gordon diet—it provides the flame in which the surplus fats of the body may burn.

Fine textured, deliciously sweet, without cloying, the enhancer of all natural flavors, enabling you to use less of them, with more natural results—Cerelose is the answer to the demand for better and better candies. Call on our Technical Staff to show you how.

CORN PRODUCTS REFINING CO.,
17 Battery Place, New York City.

Gentlemen:

Have one of your practical staff drop in to see me next time he is in our neighborhood. I would like to know more about how Cerelose fits into our line.

Name

Address

City State

*Are you among
the many now
using Nucoa
Hard and Soft Butters?*

NUCOA Hard and Soft Butters are so tremendously popular among the best confectioners of the country—

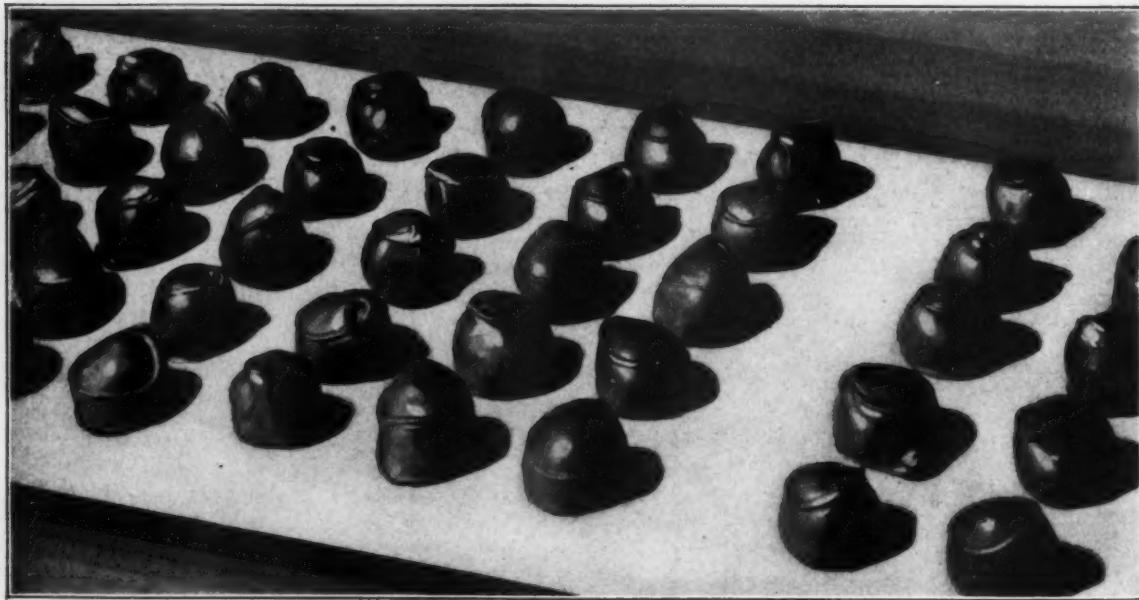
Because they are always pure . . . always uniform, batch after batch, every day—

Because they are odorless, flavorless—
100% neutral—

Because of their unvarying goodness and keeping qualities.

Made in varying melting points for every purpose and for differing climatic conditions, confectioners who standardize on Nucoa Butters may depend on getting precisely the same result from a given recipe *every time*.

Let us send you a copy of the interesting little book, "The Whats and the Hows," telling about Nucoa Products for Confectioners.



NUCOA PRODUCTS

Nuoline Plastic Nuoline Filbisk Plastic Filbisk Firmtex Nucoa Hard Butters

The Best Foods Inc.

NEW YORK

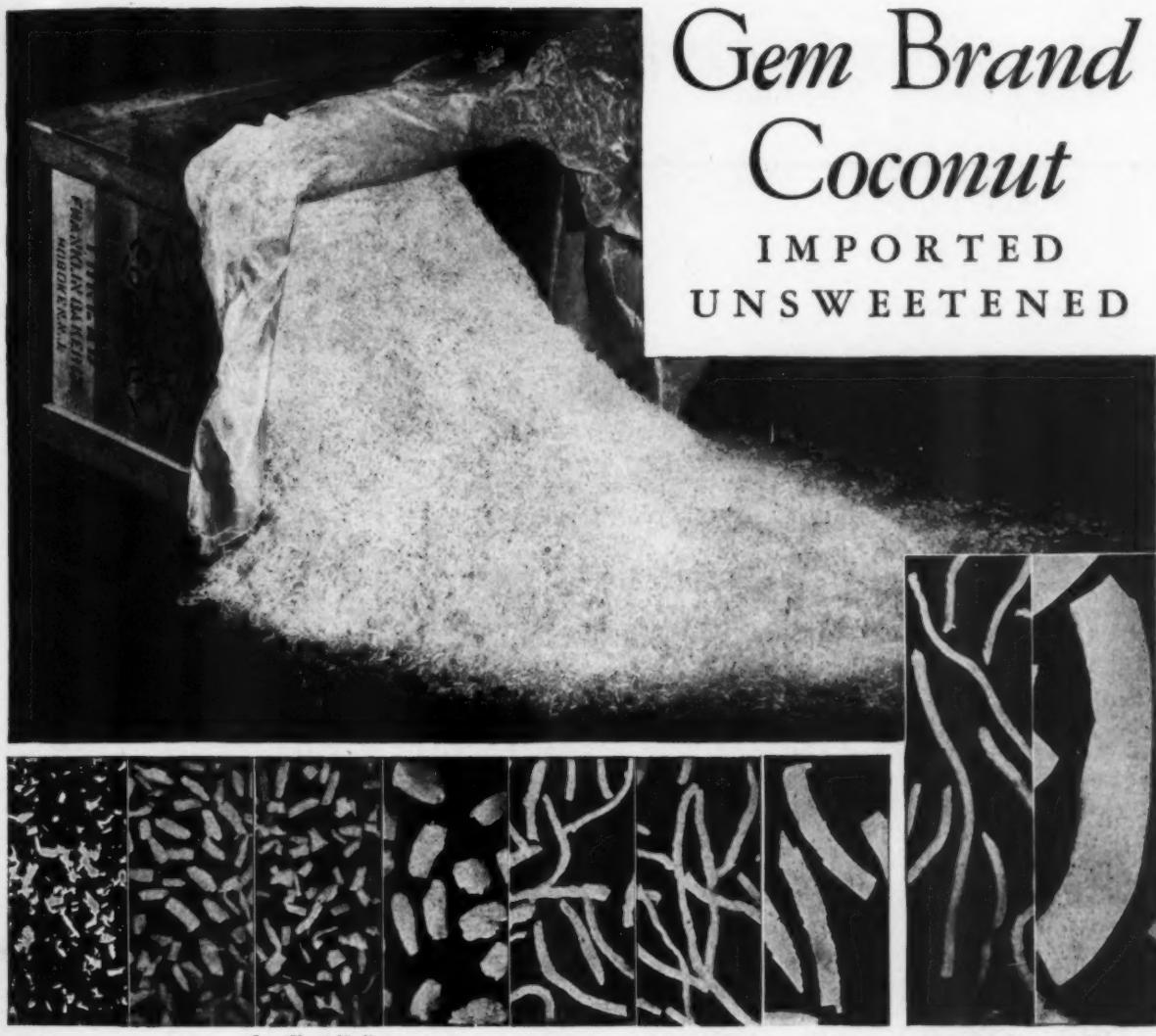
CHICAGO

SAN FRANCISCO



Gem Brand Coconut

IMPORTED
UNSWEETENED



Macaroon Medium Star (Short) Medium Coarse Fancy Standard Thread Strip Long Thread Slice

EVERY GEM CUT HERE SHOWN IS ACTUAL SIZE FROM AN UNRETouched PHOTO

GEM BRAND COCONUT can be depended on to reach you retaining all its true flavor, pure white color, full original oil content and low moisture content. Regular shipments in triple-lined cases, from one of the most fertile coconut-growing spots on the globe: Luzon in the Philippines. Franklin Baker experts take the pick of an annual crop of 350,000,000 nuts, supervise in their own three modern plants every

operation of cracking, shredding, sieving and drying just as it is done in the Hoboken plant of the Franklin Baker Company. Whether you want it cut Macaroon, Medium, Star Short, Coarse, Fancy, Standard Thread, Long Thread, Strip, or Slice, you can be sure of the A1 pure fresh coconut in Gem Brand. Prove it to yourself by using the coupon for a generous free sample.

**FRANKLIN
BAKER'S
COCONUT**
© 1929 G. F. Corp.

Both domestic and imported coconut in a complete variety of cuts

Mfg. C. 12-29

Franklin Baker Company, Inc., Hoboken, N. J.

Gentlemen: In accordance with your offer, send me a generous free trial supply of Franklin Baker's Gem Brand Imported Coconut (unsweetened).

Cut (type) wanted _____

My name _____

Address _____

City _____ State _____

I buy through _____



YOU'RE HEADED IN THE RIGHT DIRECTION

if you insist on uniformity in your chocolate coating—

To know that you are getting a coating of unvarying thickness is the best chocolate insurance you can have.

ROCKWOOD products are the pioneers of laboratory controlled chocolate coating (*the only way viscosity can be accurately controlled*).

WHY NOT INVESTIGATE. WE CAN
FURNISH YOU WITH SOME INTER-
ESTING FACTS AND FIGURES.



ROCKWOOD & COMPANY

BOSTON BROOKLYN, N. Y. CHICAGO





A Great Variety of Goods — Fragile, Solid and Liquid Now Packed in Fibre Board Containers



Fiberguard
Recased End
Shipping Box



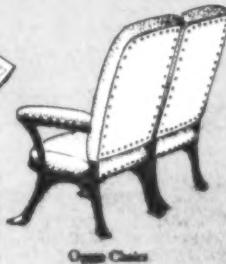
Matches



Shoes



Tobacco, Cigars
Cigarettes



Open Chair



House
Paint

Everything in Case



Reshipping Case
for Bottles and
Bottled Goods



Toys — All Kinds



Lamp Wrappers



Dry Cell
Batteries



Soups, Washing
Powders and
Flakes



Milk, Preserves, Etc.



Slotted Carton for all
Commodities

We Are Anxious to Please Customers Through Service

INDUSTRY in the United States speeds up each year. As progressive manufacturers reach out for new records in production and lower costs, quick service from suppliers becomes a necessity. In order to meet this high-speed program we have built up a strong chain of factories located in industrial centers and equipped to handle quickly all orders for corrugated or solid fibre products and boxboards.

We recognize service as an effective builder of prestige and good will and through this chain of plants we are seriously striving to refine our service and please our customers.

May we help you with your packing and shipping problems? Simply fill in and mail COUPON below.

Some Industries Now Using Our Solid Fibre or Corrugated Boxes

Bakery Goods	Furniture	Shoes
Canners	Stationery	Breakfast Foods
Building Material	Lamps and Shades	Proprietary Remedies
Sporting Goods	Tobacco—all forms	Perfumery
Books and Magazines	Paints and Varnishes	Spices
Toys	Automotive	Foods—All Kinds
Crockery	Glassware	Instruments
Bottlers	Insecticides	Brooms, Brushes, Etc.
Fruit Packing	Rubber Goods	Ceramics
Radio Goods	Electrical Goods	Leather Goods
Pictures	Men's, Women's and Children's Furnishings	Doors
Vegetable Growers	Millinery	Hardware
Meat Packing	Confectionery	Dry Cell Batteries
Dairy Goods	Carpets and Rugs	Enamelware
Soaps and Chips and Washing Powders		Filing Cabinets
Matches		Electric Light Bulbs

CONTAINER CORPORATION OF AMERICA

and MID-WEST BOX COMPANY

111 W. Washington Street

Chicago, Illinois

Six Mills—Twelve Factories—Capacity over 1200 tons per day

RETURN COUPON

CONTAINER CORPORATION OF AMERICA
111 West Washington Street, Chicago

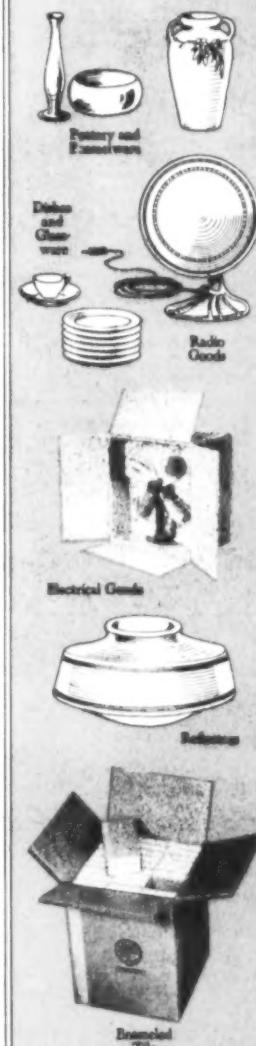
Gentlemen: Please have one of your experts check our present packing and shipping methods—without obligating us—for the purpose of reducing our costs if possible.

Name _____

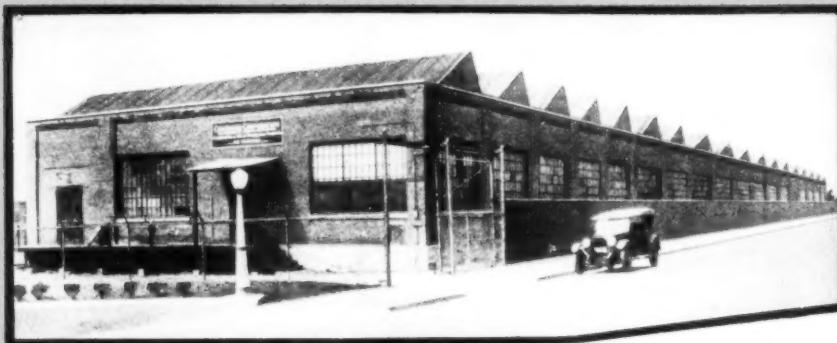
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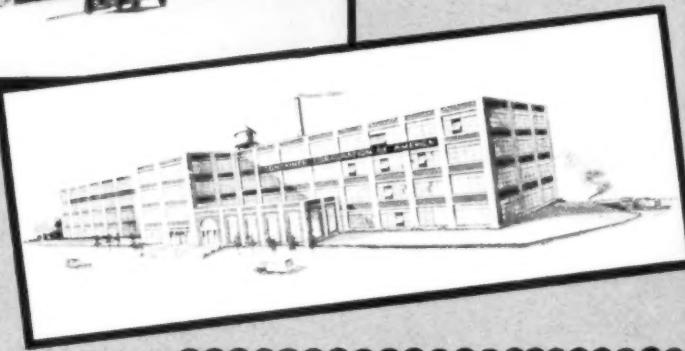
Address _____



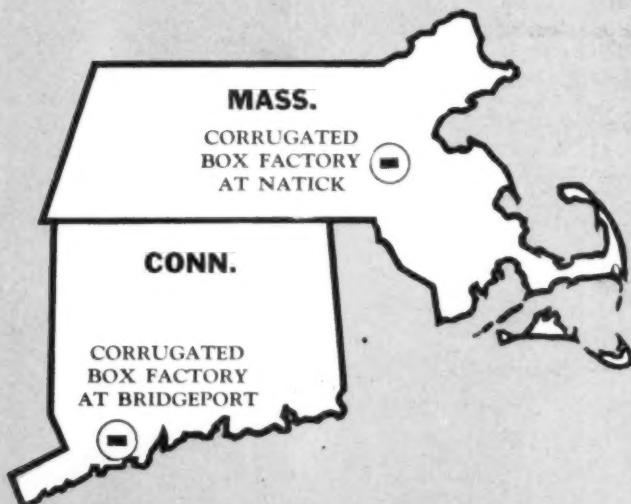
Wherever goods are
manufactured — there
you will find our boxes
reducing packing and
shipping costs.



Left—Our corrugated box plant at Bridgeport, Conn.—an asset to New England shippers.



Our corrugated box plant at Natick, Mass., was formerly the Corrugated Paper Mills, well known throughout New England.



THE HOME OF DEPENDABLE CORRUGATED SHIPPING CONTAINERS



【 Exhibit No. 6 of a Series 】

CORRUGATED BOX FACTORIES of the **CONTAINER CORPORATION OF AMERICA** and **MID-WEST BOX COMPANY**

in Massachusetts and Connecticut

ONE of the latest additions to the large Container Corporation family is the Corrugated Paper Mills at Natick, Mass., well known throughout New England. The former clientele of this modern plant are assured of the highest quality corrugated shipping containers and products under Container Corporation supervision and direction and its strategic location near Boston permits a satisfactory handling of all orders.

Our corrugated plant at Bridgeport, Conn. was inaugurated at about the same time in 1928 and is now equipped to handle customers' requirements for dependable corrugated boxes in record time.

Both the Natick and Bridgeport plants include among their equipment the latest refinements in corrugated box manufacture which tend to reduce cost and increase quality.

These plants serve the same general territory—the New England States.

OTHER FACTORIES AND MILLS

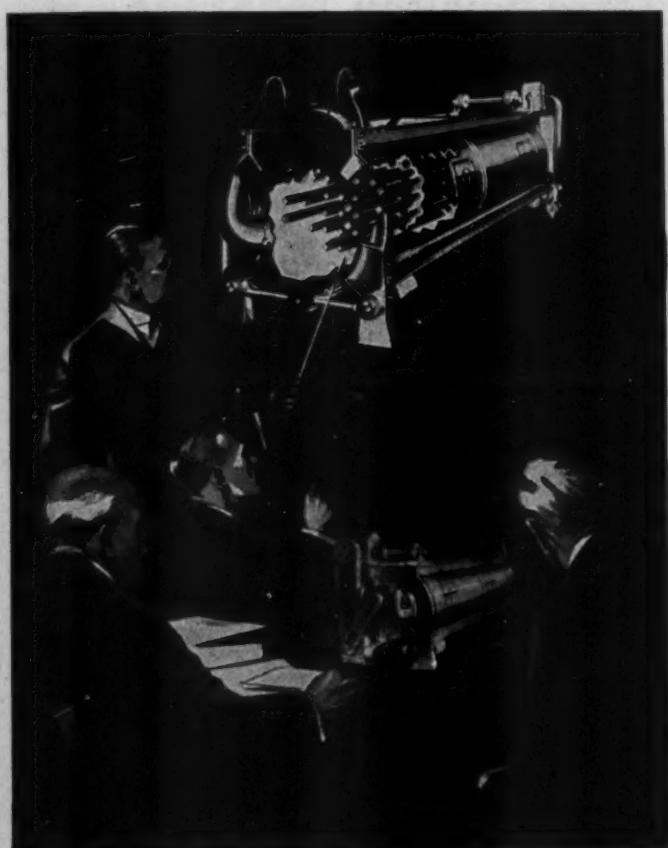
at Chicago, Anderson, Ind., Kokomo, Ind., Cleveland, Cincinnati, Circleville, O., Fairmont and Charleston, W. Va. and Philadelphia.

**HAVE BEEN FEATURED IN PREVIOUS
INSERTS**

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Huhn CHINOOK Dryer



POPULARITY Based on PERFORMANCE

THE unassailable evidence of the unequalled efficiency of the "Chinook" Starch Drying and Cooling System assures the most skeptical that here is a product that successfully overcomes every point of deficiency found in dryers and coolers of ordinary construction.

Tested and proven under actual factory conditions, in the largest establishments in the country, the "Chinook" Dryer stands out in bold relief as the most efficient, practicable and economical dryer in existence today.

Its sturdy construction and durability means low operating costs and its specialized design makes installation a simple matter, adaptable for any plan of factory arrangement.

Backed by a definite guaranty, sustained by an organization of established reputation and responsibility, the "Chinook" System eliminates all hazards in the "starch conditioning" department of your business.

Where Nothing But the Best Will Do

Among these names, a partial list of users, are some you know. Their enthusiastic endorsement is a significant guaranty of "Chinook" dependability and service.

CORN PRODUCTS REFINING CO.	Argo (Cook County), Ill.	WALTER LOWNEY CO., LTD.	Montreal, Can.
THE CAMPFIRE COMPANY	Maywood, Ill., and Cambridge, Mass.	FEDERAL SWEETS & WAFER CO., INC.	New York, N. Y.
THE SHOTWELL MFG. CO.	Chicago, Ill.	PAUL F. BEICH CO.	Chicago, Ill.
F. W. AMEND CO.	Chicago, Ill.	O. T. STACY CO.	Rochester, N. Y.
THE CRACKER JACK CO.	Chicago, Ill.	GEORGE ZIEGLER CO.	Milwaukee, Wis.
E. J. BRACH & SONS	Chicago, Ill.	MISTRO CHOCOLATE CO.	Brooklyn, N. Y.
E. H. EDWARDS CO.	Chicago, Ill., and Brooklyn, N. Y.	VICTOR G. BLOED CO.	Baltimore, Md.
FARLEY CANDY CO.	Chicago, Ill.	LOOSE-WILES BISCUIT CO.	Kansas City, Mo.
KIRKE BROS. CO.	Springfield, Mass.	ALLEN CANDY MFG. CO.	Weatherly, Pa.
MARON, AU & MAGENHEIMER CO.	Brooklyn, N. Y.	GREEN BROS. CO.	Springfield, Mass.
HENRY HEIDE, INC.	New York, N. Y.	NUTRINE CANDY CO.	Chicago, Ill.
DELCKE MALLOW CO.	Chicago, Ill.	W. F. SCHRAFFT & SONS CORP.	Boston, Mass.
HARDIE BROS. CO.	Pittsburgh, Pa.	E. GREENFIELD'S SONS CO.	Brooklyn, N. Y.
DILLING & CO.	Indianapolis, Ind.	FRED E. FOOS CANDY CO.	Baltimore, Md.
LOFT, INC.	Long Island City, N. Y.	STANDARD CANDY CO.	Nashville, Tenn.
NATIONAL CANDY CO.	St. Louis, Mo.	BRANDLE & SMITH	Philadelphia, Pa.
A. J. CALEY & SONS	Norwich, England	PEL BROS. STARCH CO.	Indianapolis, Ind.
BOSTON MARSHMALLOW & CANDY WORKS	Boston, Mass.	KROGER GROCERY & BAKING CO.	Cincinnati, Ohio
BUNTE BROTHERS	Chicago, Ill.	J. LYONS & CO. LTD.	Greenford, Middlesex, Eng.
		ZION INSTITUTIONS & INDUSTRIES	Zion, Ill.

Special Prices Now in Effect—Write or Wire for Particulars

A. HUHN MANUFACTURING CO.

Office and Factory

3915 Hiawatha Avenue

Minneapolis, Minnesota

NEW YORK OFFICE

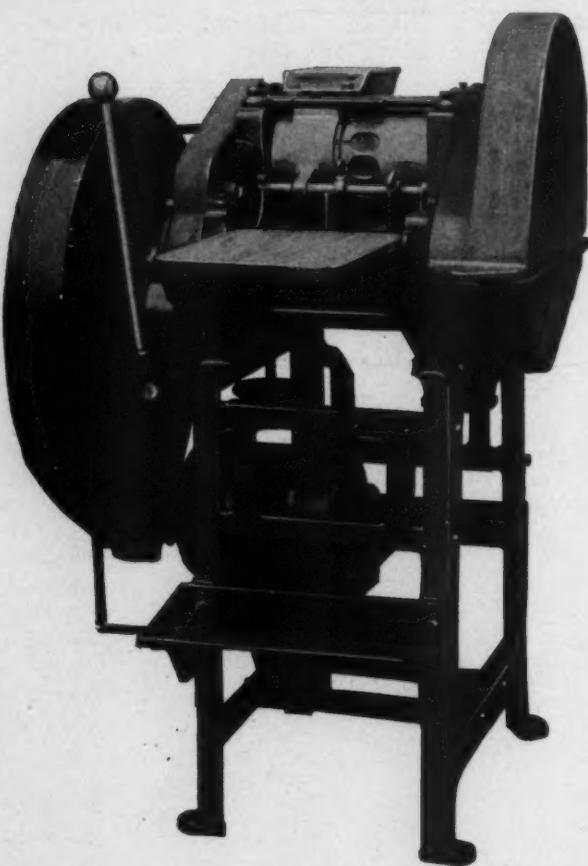
23-25 BEAVER ST., NEW YORK CITY

D. M. KABLE & COMPANY
Offices—Imperial Hotel
Tokyo, Japan

London Representative:
MESSRS. BRAMIGE & CO., LTD.
92 Fenchurch St., London, E. C. 3



Racine Automatic Sucker Machine (PATENTED)

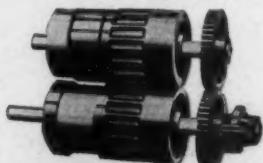


This is the machine that made the "all day sucker" the most popular form of hard candy in America.

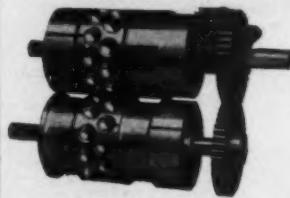
The latest model pictured above represents years of gradual development and because of the variety of its products it is practically a complete hard goods equipment in itself.

It is supplied with pulley for belt drive or with motor direct connected as illustrated. The length of conveyor is optional but 24 feet with air tunnel and motor driven blower is the accepted standard.

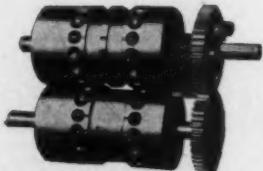
Note the variety of products made by these interchangeable rolls.



STANDARD SUCKER ROLLS
Candy on one end of the stick



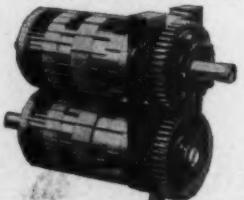
DUPLEX SUCKER ROLLS
Two suckers at a time



DUMBELL SUCKER ROLLS
Candy on both ends of stick



DROP ROLLS
Engraved as desired



CUTTING ROLLS
Waffles and Satin Finish Goods

RACINE CONFECTIONERS' MACHINERY COMPANY
RACINE, WISCONSIN, U. S. A.

To owners and prospective owners of air conditioning Systems==

OWNERS of air conditioning systems manufactured by the Benz Engineering Corporation of Newark, New Jersey, will be interested to know that this corporation has been purchased in its entirety. The satisfactory performance and dependability of equipment already installed is of necessity, a part of our responsibility in this purchase. Our engineers will be glad to answer promptly all questions pertaining to the proper operation of your equipment.

To engineers and executives in all lines of industry, interested in the application of air conditioning to their own manufacturing processes, we offer the services of an organization ably managed, securely financed, with adequate production facilities and a capable engineering staff--ample assurance of our ability to execute contracts of any size.

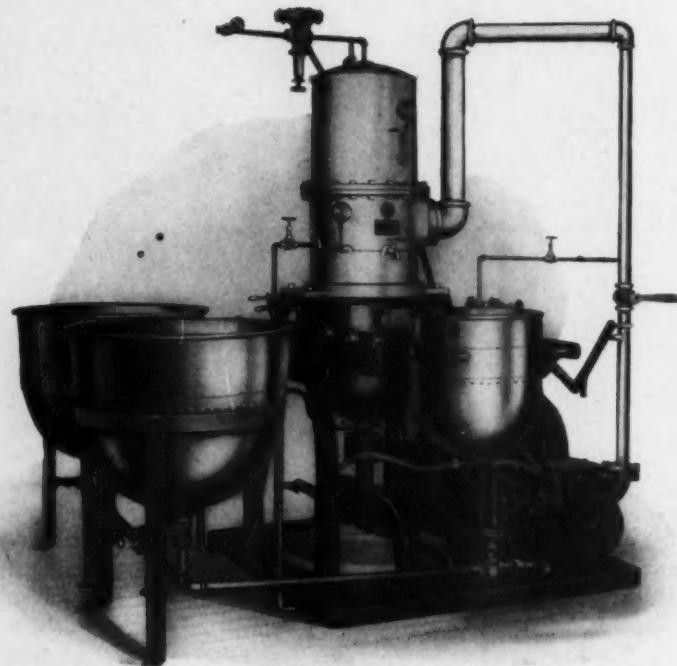
MARYLAND AIR CONDITIONING CORPORATION

Clarkson, McComas, Donaldson and Race Sts.

Baltimore,

Maryland





Now it is

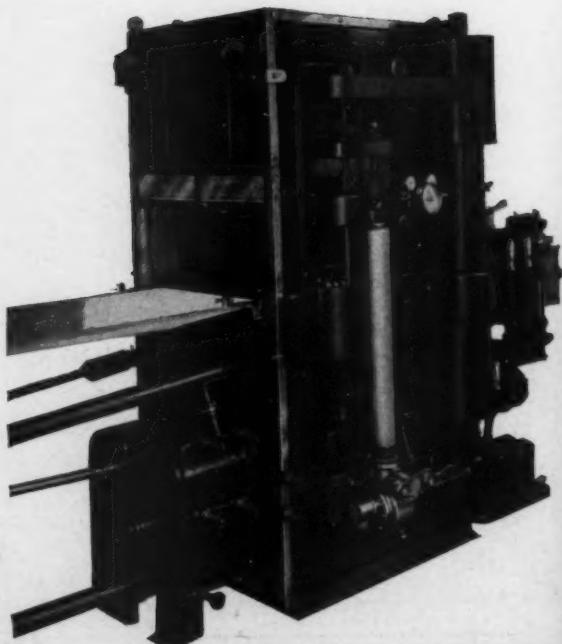
The Continuous Cooker

This National Equipment Company product will bring you sure uniform results. Your hard candies cooked under a vacuum will keep better and this machine, continuous in operation, assures large production. Without this modern machine, no manufacturer can expect to obtain maximum production of hard candies at minimum costs. Investigate!



The 1929 Enrober

A National Equipment Company product that you all know. It's a big factor in the manufacture of candy all over the world. And the Automatic Temperature Control—a recent improvement—assures high quality and good appearance. It can be used to coat tiny Opera Drops or large Easter Eggs with equal facility. WIDE ENROBERS are an economy and will increase your daily output.



It is your turn to use our experience

—an experience that is of value to you only if you make full use of it.

The National Equipment Company engineers have an intimate knowledge and real appreciation of the everyday problems confronting you. And they, with their long experience gained during the past 37 years that the National Equipment has made good equipment for the candy trade, are in an enviable position to help you achieve that efficient and economical production of a quality that you have set as your goal.

The splendid success of the 1929 Full Automatic Enrober is ample proof of

their ability to cope successfully with—and solve—present day production problems.

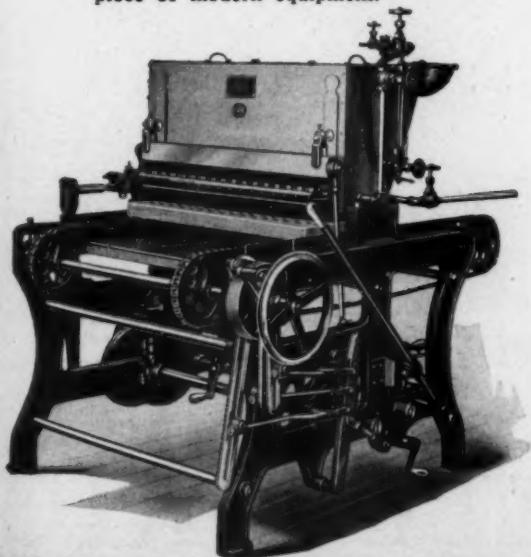
This highly specialized skill is at your disposal, and we ask simply that you make full use of it. The presentation of your individual problem incurs no obligation and all equipment recommended by our engineers—for the usual or unusual job—is offered with a guarantee that it will function economically as represented by us, or you need not accept it. We make—or can make—practically everything you need. We'd be glad to help you in achieving straight line production—won't you call on us?

National Equipment Company

Largest Manufacturer in the World of Candy and Chocolate Machinery
Springfield, Massachusetts, U.S.A

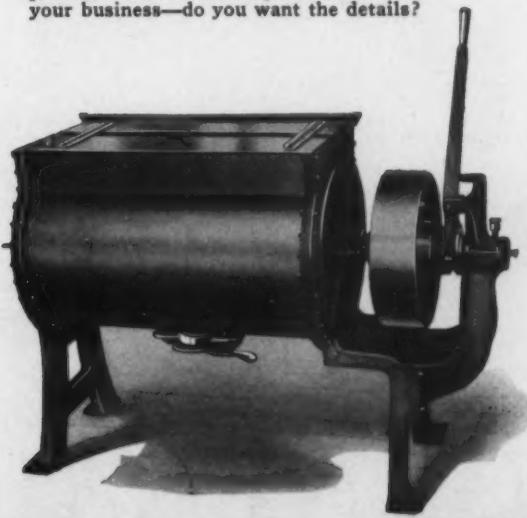
The Springfield Depositor

A Depositor designed to accommodate your own particular requirements. Whether you make cream centers, marshmallows, peanut clusters, or biscuits, the Springfield Depositor with special pump bar and other equipment is adaptable to your needs. Let us tell you more about the work that can be accomplished with this exceptional piece of modern equipment.



Springfield Marshmallow Beater

Delicious high grade marshmallow, by either the hot or cold process—larger volume—decreased beating time—less power necessary . . . These are a few of the benefits you can derive from the use of the Springfield Marshmallow Beater. It is heavily constructed and the marshmallow container is jacketed so that the temperature of the batch may be controlled at all times during the beating process. Here's a real profit-maker for your business—do you want the details?



NEC-27

Helping produce 6,000,000 Milky Way bars a day - /

BRANCH OFFICES
2 PINE STREET
SAN FRANCISCO, CALIFORNIA
37 CLEVELAND PLACE
NEW YORK CITY NEW YORK

MARS Incorporated

2019 to 2059 North Oak Park Ave.
Chicago Illinois

September 28, 1929

General Electric Company
230 South Clark Street
Chicago, Illinois

Attn: Mr. W. P. Cleveland.

Gentlemen:

We believe that our new plant is the very latest in the candy manufacturing business. It is the only straight line production plant in the country, and is equipped with standard and special machines, which are practically all driven by General Electric Motors.

There are about 150 motors of different sizes having a total of 750 H. P. They are connected direct, silent gear, silent chain, texrope, and belt. About 75% of these motors are General Electric and are very dependable.

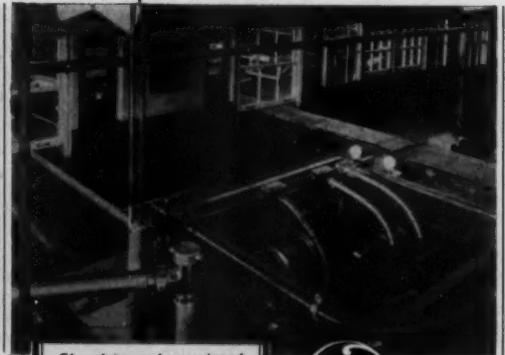
Some of our machinery is reversible. This electrical equipment we have found to be A #1.

Our plant has a capacity of six million "Milky Way" bars per day. They are made in two flavors, Chocolate and Vanilla, and are noted for pure ingredients.

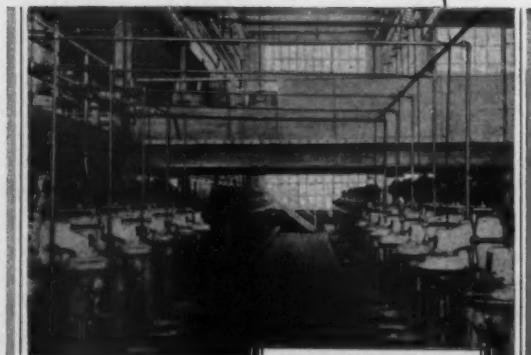
We are well satisfied with General Electric Motors, starters, controllers, etc., and will be glad to recommend them.

PJB:MD

Yours truly,
MARS INCORPORATED
BY: *John Hansen*
Maintenance Superintendent



Chocolate enrober equipped
with G-E Type KT and Type
MT motors



Battery of road beaters equip-
ped with G-E Type KT
motors



Motorized Power
-fitted to every need

JOIN US IN THE GENERAL ELECTRIC HOUR, BROADCAST EVERY SATURDAY AT 9 P.M., E.S.T. ON A NATION-WIDE N.B.C. NETWORK

201-168

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y., SALES OFFICES IN PRINCIPAL CITIES

Hot from the bat the grounder goes sizzling close to the field. The infielder has it—with one synchronized motion he scoops the ball—swings back for his throw—throws—and the man is out at first! Starch conditioning troubles are "out at first" if you use the Hersey Starch Conditioner. This apparatus cleans, dries, and cools the starch all in one synchronized motion.



THREE STEPS...

...all in one synchronized motion

*Ten Points of Hersey Superiority

- 1 Starch delivered to Mogul at uniform temperature.
- 2 Handles full capacity of Mogul.
- 3 Priced far below any other method of correctly conditioning starch.
- 4 No loss of starch through dust or leakage.
- 5 Flexibility of installation.
- 6 No condensation in Cleaner or Cooler.
- 7 Fool proof—nothing to get out of order.
- 8 No special operator—only labor required for regular lubrication.
- 9 Low power consumption.
- 10 Full automatic temperature control.

LIKE the fast infielder who gets his man at first base by combining the three steps of his throw into a single motion, so the Hersey Starch Conditioner gets better results by synchronizing the three steps of drying, cleaning and cooling starch into one continuous process. This eliminates wasted labor, lost time, and ruined starch. It doubles production, halves the number of boards needed, and makes possible full time operation of the Mogul.

These advantages—a few of Hersey's ten points of superiority*—can actually be had for *less money* than you would pay for any other starch conditioner, or for any collection of separate units. Investigate the Hersey Starch Conditioner. Such an investment at such a price is rare.

HERSEY STARCH CONDITIONER

HERSEY MANUFACTURING COMPANY. *Main Office and Works:* Corner E and 2nd Streets, South Boston, Mass. *Branch Offices:*
NEW YORK CITY, 290 Broadway; PORTLAND, ORE., 475 Hoyt Street; PHILADELPHIA, PA., 314 Commercial Trust Bldg.; ATLANTA, GA., 510 Nass-Howell Bldg.;
DALLAS, TEX., 402 Practorian Bldg.; CHICAGO, ILL., 10 So. LaSalle Street; SAN FRANCISCO, CAL., 690 Market Street; LOS ANGELES, CAL., 450 East Third Street.

There is no reason why any plansh



A few trade marks of the many nationally known users of MANUFACTURED WEATHER

YOU WILL KNOW THESE USERS OF CARRIER SYSTEMS

AMBROSIA CHOCOLATE CO.
AMERICAN CHICLE CO.
CHESTER A. ASHER
BEECH-NUT PACKING CO.
BELLE MEAD SWEETMAKERS
BISHOP & CO.
EARLE E. BORTZ
BRANDLE & SMITH CO.
BROCK CANDY CO.
BUNTE BROS.
BUTTER CANDIES, INC.
CHASE CANDY CO.
CHOCOLATE PRODUCTS CO.
D. L. CLARK CO.
GEORGE CLOSE CO.
J. N. COLLINS CO.
COMMON SENSE GUM CO.

CONTINENTAL CANDY CORP.
FRANK H. FLEER & CO., INC.
J. O. GILBERT CHOCOLATE CO.
THE GREAT A. & P. TEA CO.
E. GREENFIELD'S SONS
HAPPINESS CANDY CO.
HEALTH PRODUCTS CORP.
HENRY HEIDE, INC.
HUYLERS, INC.
ROBERT A. JOHNSTON CO.
LOFT'S, INC.
LUDEN'S, INC.
HENRY MAILLARD, INC.
MERRICK'S, INC.
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NEW ENGLAND CONFECTIONERY CO.
THE NUNNALLY CO.
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REICHARDT COCOA & CHOCOLATE CO.
ROUNTREE CO., LTD.
SAFEWAY STORES, INC.
W. F. SCHRAFFT & SONS CORP.
LOUIS SHERRY, INC.
SHUTTER-JOHNSON CANDY CO.
STANDARD CHOCOLATE CO.
MRS. STOVER'S BUNGALOW CANDIES, INC.
STRONG COBB & CO., INC.
UNITED DRUG CO.
VONEIFF DRAIER CO.
S. F. WHITMAN & SON, INC.
WM. WRIGLEY, JR., CO.



Call on Carrier Engineers for additional service or to check your system

Confectioner should not have MANUFACTURED WEATHER

THREE is no longer any reason why any confectioner should not have *Manufactured Weather* in his plant. Cost need not be a determining factor . . . for now, since the development of the Carrier Unit Air Conditioner, *Manufactured Weather* is available for any candy manufacturer, no matter how small his plant may be.

The makers of most of the world's best-known confections for years have made, packed and stored their products in an atmosphere of *Manufactured Weather*, as produced through the Carrier Central Station System for Air Conditioning. Now the Carrier Unit provides exactly the same positive control of conditions for the smallest manufacturer . . . for the individual department . . . for hand-dipping, machine enrobing and hard candy rooms . . . packing departments . . . manufacturers' and jobbers' storage rooms.

Either System . . . Central Station or Unit Air Conditioner . . . assures confectioners the same positive and automatic control of temperature, humidity, air movement and air purity for every stage of the various manufacturing processes . . . for the many different kinds of confections requiring totally different atmospheric conditions.

The Carrier Conditioned candy factory means to the manufacturer complete weather independence, uniform schedules of production and packing, increased production, improved quality of the product, more healthful working conditions and better employee morale, decreased sick-leave and labor turnover.

A visit from one of our engineers will show you, without obligation, how MANUFACTURED WEATHER can make "Every day a GOOD day" for YOU, regardless of your requirements.

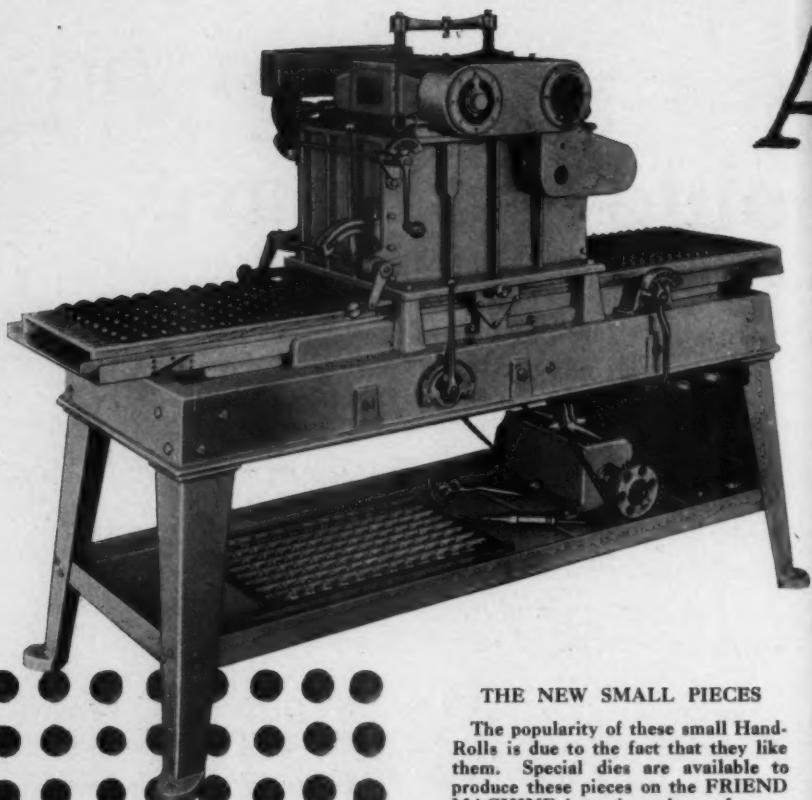


Two issues of our publication, "The Weather Vein," are of particular interest to everyone in the confectionery field. One is devoted to the scores of trade marks of users of Carrier Systems. The other describes in detail Schrafft's great new plant and, incidentally, tells what *Manufactured Weather* is doing in the production of their famous confections. Upon request, we shall be pleased to send copies to anyone interested. Just ask for copies of the "Trade Mark" and "Schrafft" numbers of "The Weather Vein." And if you wish to receive all future issues of this publication, the price of a subscription is simply a request on your letterhead.

Carrier Engineering Corporation

Offices and Laboratories
NEWARK, NEW JERSEY

New York	Philadelphia	Boston	Chicago	Cleveland	Detroit
Washington	Kansas City		Dallas	Los Angeles	



THE NEW SMALL PIECES

The popularity of these small Hand-Rolls is due to the fact that they like them. Special dies are available to produce these pieces on the FRIEND MACHINE in various shapes for any production requirements.

Centers from 100 to 400 to the pound.



EASTER IS COMING—
FRIEND MACHINES will form
any size eggs from the penny egg
up to the one-pound size.

A Transformation That Has Established A New Standard in Cream Centers

Undoubtedly, the most outstanding pertinent development in candy machinery, is the transformation and universal acceptance of hand-roll creams—brought about by the development of the

HAND FRIEND ROLL
Plastic Center Machine

That is a broad statement but is readily proven by indisputable facts. The sales of hand-rolls are increasing faster than any other confection.

The past year has seen a steadily increasing number of confectioners—large and small—install FRIEND HAND-ROLL MACHINES.

There is a logical reason for the widespread acceptance of hand-rolls—quality is the answer and every confectioner knows that hand-rolls mean quality.

The FRIEND has made it possible to produce this quality in volume production at a lower cost—600 pounds to 10,000 pounds per day with one machine and one operator.

Your plant is neither too large nor too small for the FRIEND MACHINE to show you a substantial saving in a surprisingly short time. Write today for particulars.

HARRY L. FRIEND

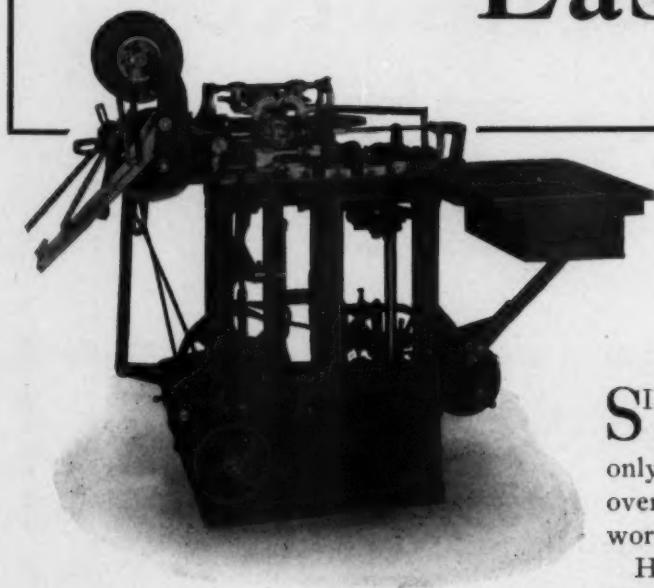
52 India Street

Cable Address—"Friendship"

Boston, Mass.

Represented in Great Britain by Bramigh & Co., 92 Fenchurch Street, London, E. C. 3
Australia, New Zealand and Tasmania by Henry W. Peabody & Co., Melbourne, Sydney
Japan, China and India—C. J. Baker; Germany—Max Loesch, Dresden

For foiling Easter Eggs



Assorted
Chocolates
Bon Bons

SIXTY to eighty per minute is the speed at which this machine foils—and it requires only one operator. This means a real saving over hand-wrapping. And it does better work, too.

Handles the product so gently that even "liqueur" and "soft center" chocolates can be foiled without damage.

Uses tin or aluminum foil.

Can be adjusted to wrap various sizes and shapes.

Simple in construction, easy to operate, and very economical in its use of foil.

For complete information about the Forgrove, or other wrapping machines for confectionery products, get in touch with our nearest office.

PACKAGE MACHINERY COMPANY
Springfield, Massachusetts

New York: 30 Church St. Chicago: 111 W. Washington St.
London: Baker Perkins, Ltd., Willesden Junction, N. W. 10



PACKAGE MACHINERY COMPANY
Over 150 Million Packages per day are wrapped on our Machines

When you need FOOD COLORS

Let your first thought be

ATLAS

Manufactured by

—KOHNSTAMM—

First Producers of
Certified Colors

Strength

Purity

Brilliance

Uniformity



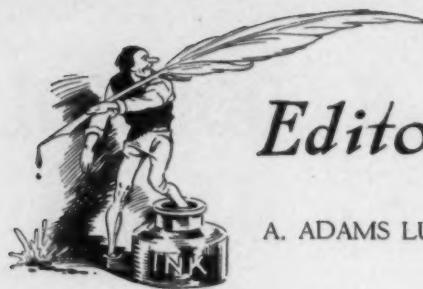
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Protection

H. KOHNSTAMM & CO., Inc.

NEW YORK, N. Y.
83-93 Park Place

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11-13 Illinois St.



Editorial

A. ADAMS LUND, Editor

Why Be Merry?

WHILE the Dean Ingles of other industries are glooming over the late lamented bull market on the Stock Exchange, there is fresh evidence daily that the candy industry is at last getting into its stride.

It is a fact of some moment that the candy industry has seldom prospered from periods of so-called "general prosperity." During the boom years of the previous administration, when industry in general prospered as it never prospered before, the candy industry passed through one of the most trying periods in its economic existence.

Candy is the poor man's luxury. Radios and cars may forsake him but he can still sweeten up the drab existence of Jennie and the kids by bringing home the Candy Special after he gets his pay on Saturday night.

When conditions have reached a pass

where the average man's income is pledged to meet the installments on the radio, the new suite of dining room furniture, the electric refrigerator and the washing machine, there is scant margin left for the simpler pleasures of candy. It is an immutable fact that in every consumer dollar there are just 100 cents.

Many a winsome charmer who exacted and received a string of pearls last Christmas will be relieved to know that her fallen idol can still afford a five-pound box of candy.

So perhaps it is all for the best, this having the worst behind instead of in front of us. Perhaps it is our golden opportunity to instill the lovable qualities of candy into the hearts and minds of men that we may face the threat of future eras of prosperity with the confidence born of a job well done.

And that is our message of a *Merry Christmas*.

More Power to You, Quaker City

QHE traveling N. C. A. Sales Clinic, which Max Kelly fondly refers to as his "Flying Circus," has not been without its immediate results. From the Quaker City comes a response which will gladden the hearts of all true candy believers.

The Philadelphia Candy Institute is the name of a new cooperative association which its organizers hope will be used as a pattern for similar cooperative marketing agencies throughout the country. The Institute is composed of local manufacturers, jobbers, and members of the local club of

the National Confectionery Salesmen's Association. Its object is to study marketing and marketing conditions; to modernize the sales methods of manufacturers, jobbers and retailers, and to eliminate so far as possible methods and practices detrimental to their interests as a whole. Outside talent will be engaged as needed to supplement their personal activities and to guide them to a solution of the more perplexing merchandising problems.

Cooperation has become the keynote of the hour. *Other cities please copy.*

Modernizing to Meet the New Competition

WHEN President Hoover called the heads of various industries together to counsel and take counsel on the future prosperity of the nation Max Kelly, president of the National Confectioners' Association, was among those present.

What President Hoover has said and done with respect to new construction, etc., applies with special emphasis to the candy industry. You can count on the fingers of your hands the candy plants which are truly modern—which do not need extensive alterations and repairs to fit them for competition with the plants of

other industries. So although the President did not get around to specifically calling upon the leaders of the candy industry to get up and make their little speeches about how much new construction they are prepared to undertake during 1930, it is clear that there is a big job cut out for us. It is up to the candy man to get busy and modernize his factory to meet the new competition. If he needs repairs, let him make them now. If he is bursting the shell of his present factory, let him get busy on plans for a new one now. Modernizing is one way of making two dollars grow where one grew before.



What Will 1930 Inherit from 1929?

ONCE a year we pause to take stock of our accomplishments.

It is like counting noses to see who of those who toed the mark with us on the first of January last are still with us, and how far each has run. But there the analogy ends. We measure our distances in terms of machines, methods, materials—and in the esteem in which our industry as a whole is held by our fellow men.

The purpose of this Annual Review Number is to remind us that the candy in-

dustry is not standing still—that we as individuals of that industry cannot stand still if we wish to be counted in at the finish.

But the word "review" hardly does justice to an investigation of this character and scope. It implies looking backwards for our inspiration. Rather think of it as an Inventory of the Candy Industry's Progress during 1929. It is an inventory in a very real sense, an inventory of the tools which 1930 will inherit from 1929.



At the End of the Dotted Line

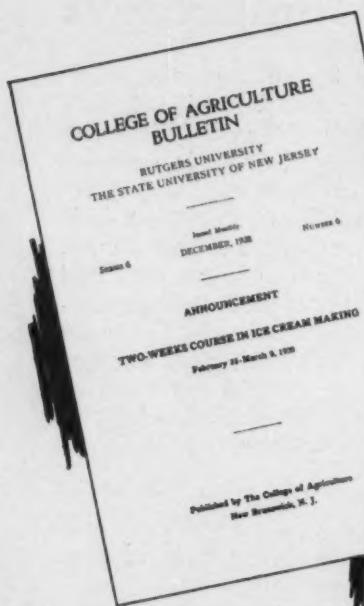
FOllowing on the heels of the recent series of candy rallies held by the N. C. A. in the larger confectionery centers, Boston led off the subscription with a bang. Then everybody in Boston went home confident that they had done their duty by themselves and the N. C. A. Their cooperation apparently subsided *at the end of the dotted line*.

New York's rally introduced the most

successful Candy Week and Sweetest Day campaign which that area has ever seen. It seems all but two manufacturers in the metropolitan area kicked in. Plenty of business; everybody happy.

These are isolated instances typical of results all over the country. We presume the moral (if there is any moral) is "faith without works. . . ."

Let's Build a Read-Only Cache



The New Jersey State College considers the training of present and future generations of ice cream makers an important part of its duties.

Right-Class in Ice Cream Practice drawing off a can of cream from the laboratory freezer. These men will go back to their plants better superintendents, better foremen, and better demonstrators for the excellent training which they have received.

WITH apologies to the old-time nursery song about babies: "Today is the day when they give Navies away."

We frisk our Admirals, our Generals, and our liquor detectors for their guns and melt them down to make cylinder blocks and loud speaker gadgets.

Outside of Russia, China and a few other hard-boiled, two-gun nations, everybody is for slenderized armies and shorter naval outskirts.

Military budgets shrink. We are going in for less protection and more stripping to the kindly rays of human tolerance.

BUT—whoever heard of modern industries holding their place in the sun while sitting on empty war-chests?

Or adopting "silhouette form" in their advertising budgets?

And who dares call a conference to achieve limitation and parity in the sinews of industrial warfare?

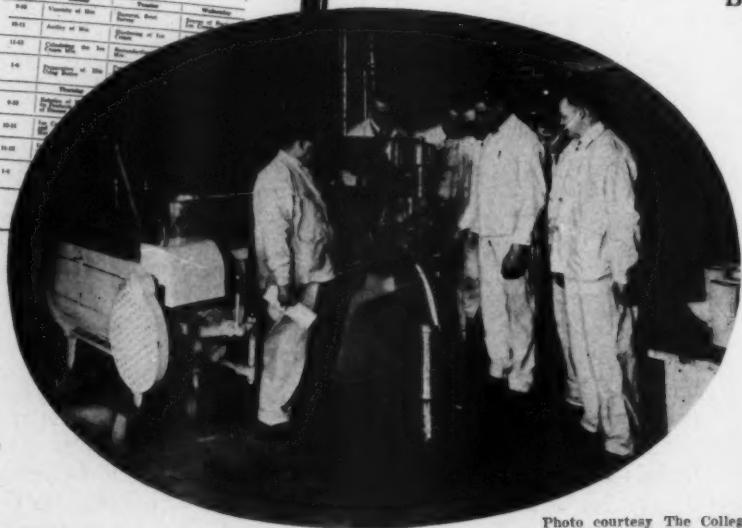


Photo courtesy The College of Agriculture, Rutgers University.

Those great big multi-cylindered machines which you see roaring up Industry's steepest Trouble Mountains on high never had a reverse gear built into them. They are the cars of progressive industries.

Side by side with the iron and steel, the petroleum, the aluminum, the brass and copper, the laundry and all the other high dollar-powered machines which breeze along on the broad highway of American Industrial Progress, roll the organized food industries—the bakers, the ice cream makers, the manufacturers of cereals, milk products, gelatin, yeast, beverages, and the like.

The Covered Wagon

While far, far in the rear, plugging along behind a pair of spavined oxen answering to the names of Old Ideas and Pennywise, the candy-

If you feel pretty good with yourself and with the world—just read this. If you feel "down in the dumps" because things in the candy industry are not what they ought to be—read it twice. You will stumble across a lot of things on the second reading that you missed on the first. Some of

By ORV H. KNEE

H. KNEE

maker brings up the tail-end of the industrial procession!

Few strains of harmony emanate from its ancient creaking equipage. And ever and anon, as some million-dollar chariot side-swipes the oxen, or makes a lucky strike on a wobbling wheel, a weak-voiced piping may be heard from the covered wagon, wailing some sad refrain about "unfair attacks," "there oughter be a law," etc.

But the complainings and wailings are lost amid the roar of a big machine as it dashes ahead, leaving an odorous, toasted, "16-degrees-cooler" trail of smoke and dust for the plodding Rearguard of Industry.

Yes, the candy wagon is on its way—but oh! man, what a long, dreary, winding way it is, with "no pushee—no pullee," while all the rest of the electrified crowd "go

a Candy Institute!

the things the author says may express your thoughts to a "T"—and he says a lot of other things which, frankly, you may not like. But if his message can urge you, persuade you or even goad you into action, we think it well worth the cost of printer's ink.

H. KNEEN

like hellee"! But enough of this—in what respects has the candy industry lagged behind other industries in industrial development?

Well, suppose we start with the bakers. Their problem, it would seem, are fairly similar to our own. What have they been doing about it?

The Baking Industry has its Bakers' Institute, its baking laboratories and its model bakery, its training school for young superintendents, its research and nutrition

studies and public education program—not to mention an organized service for members, and a standing army, thoroughly trained to meet any and all attacks on the baking industry. If you don't believe this, just start something—like the evils of white bread, for instance.

While the Candy Industry Has Its—

The ice cream industry has its cooperating associations of manufacturers and machinery men, its dairy council, its college courses all over the country, its scientific research, its statistical reports on monthly output and sales, its production charts for each section and each month, its busy corps ever seeking new products for winter, its nutrition studies, and its public-educational program to broadcast the delights and benefits of frozen sweets all over the land. Hand over another chocolate-coated Eskimo Pie while we pass on, to—

The Glass Container Association

—comprising over ninety per cent of all makers of glass containers for food and other products. The Glass Container Association has its highly-organized technical laboratory where problems of food preservation, vitamine content, color and shape preservation are met and solved. It also has its statistical department, its service for food packers, its department for simplification and standardization of glass containers, and all the while it conducts a continuous search for new and increased uses for its products, mainly in the packing of food products (including candies).

While the Candy Industry has its—Institute of Troubles! Also its Bureau of Blind Backbiting, its department of Debaters, its Open House for Lucky Strikers, its Staff for Stone-Blind Stowaways, its Wailing Wall and its Training School for young-men-soon-to-leave-the-industry (for more progressive employers).

Every Man for Himself

We, too, have our charts of production and demand, but every candymaker rolls his own chart. He dares not trust his neighbor, his supply man, his salesmen, his retailers, his public, with this highly confidential information on what he made and sold last month! Maybe there's a reason, at that—we all have skeletons in our drying ovens.

We have our Nutrition Studies—but it's a case of each big manufacturer for himself; let the receiver

Below—A view of the Chemical and Bacteriological control laboratories where students are taught something of the chemistry underlying plant procedure.



Photo courtesy The College of Agriculture, Rutgers University.

Above—A life-size ice cream plant for use of the students at Rutgers. The equipment consists of four and eight-ton refrigerating machines, hardening room, milk and butter refrigerating rooms, chocolate and gelatine cooker, mixing tank, filter, viscolizer, tubular cooler, glass-lined holding tank, coil brine holding tank, brine freezer, ice crushers and minor accessories needed for instruction.



A CANDY INSTITUTE



Photo courtesy Siebel Institute of Technology.

Students engaged in laboratory control work at the Siebel Institute of Technology. Modern methods of personnel training are hard at it in almost every large food industry except candy.

take the hindmost of the others. One almost begins to wonder—is this a health-promoting, energy-giving, highly essential food product that the confectionery industry offers to the world, or is it something to keep dark, a product somewhat off-color, like home-made "white mule" or denatured dewdrops?

Who tells the ultimate consumer about the vitamine-content in candies? Of the numerous body-building minerals inherent in candy ingredients? Of the essential proteins and carbohydrates and fats that every healthy body requires—and can get today in many varieties of confectionery? Are candy and sugar synonymous so that candy must bear the brunt of every attack upon the sugar industry? Or is it a judicious assembling of the most toothsome and wholesome delicacies which Nature has to offer from all quarters of the earth?

Where are the Research Institute, the research fellowships, the college scientists delving away in organized attacks upon the common problems of the candy industry? Where are the men who should be devoting their best thoughts, their very lives, to making candies known everywhere for what they are—essential articles of a healthy diet?

"During 1926," says Dr. Harvey W. Wiley, in "The History of a Crime," "sixty-two associates representing various industries were stationed at the Bureau of Standards. The Portland Cement Association maintains a corps of eight chemists and physicists at the Bureau. The Natural Terra Cotta Society has two, the National Dyers and Cleaners has three, the Society of Automotive Engineers four. Circular No. 296 describes in part the gigantic association of the Bureau with big business."

And the Candy Industry has how many chemists at the Bureau? As some bygone humorist once said: "That was the most eloquent silence I ever heard."

The Laundry Chair

Surely the confectioners are not the only ones who are a *little* behind in the industrial procession. Take the laundryman, for example. No doubt, he is far to the rear of the candyman. What could a mere maker of clean-clothes-from-dirty-ones do with "institutes" and "co-operation" and research?

Nothing much. All he has is the American Institute of Laundering, fourteen years old, with a model laundry completely equipped and paid for, "dedicated to the ideal of

eliminating unconstructive practices, methods and materials, and of standardizing all that was found to be desirable and constructive."

To quote from a report of the Corn Exchange Bank, of Philadelphia: "About seven years ago they came to realize that many of their most vital problems were scientific in their nature; that they were nuts for the chemical engineer and the mechanical engineer to crack through patient and thorough research. This led to the establishment of the Laundry Chair at the Mellon Institute of Industrial Research. . . . The establishment of the American Institute of Laundering seems not only significant but highly inspiring and typical of an attitude which prevails in other industries. . . ."

In all save the confectionery industry?

In a compilation of industrial research laboratories in 1927, the National Research Council found one thousand laboratories actively organized in more than 200 industries all the way from Abrasives to Zirconium.

Where You Stand on Research

Yes, there were some confectionery laboratories in the list—to be exact, three. One in Chicago, one

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Photo courtesy Siebel Institute of Technology.

in Milwaukee, and one in Cambridge, Mass. But the baking industry listed eight; the beverage industry, 36; foods of all kinds, 126.

Fruit and fruit products, milk, starch, yeast, and other food products are being intensively studied, day in and day out, in scores of scientific laboratories all over the country. Sugar itself is the subject of research in 33 establishments where the chemist reigns. But confectionery—three. Yes, something must be done about it.

Now if you were asked to support a Candy Institute (and you probably will be if you expect to remain in the candy business) or if you were asked to aid in establishing a *self-supporting* Institute, you would be entitled to know what practical benefits might be expected of it. Perhaps you are like many another confectioner—you admit the benefits other industries have obtained from their Institutes but doubt whether the Institute Idea could ever be as successful for candy. And does research pay in the sense that the same amount of capital expended on the production or sales end of the business would be expected to pay?

You might ask the Du Pont Company as to that. The Chemical Director of this highly prosperous



maker of explosives, dyestuffs, artificial leather, paints, varnishes, and a multitude of other products developed by consistent research, once revealed that from 1912 to 1918 alone the company had expended six million dollars for research. "The calculable saving," he finds, "disregarding those benefits which cannot be figured in dollars and cents, though extremely important, amounts to \$82,401,000."

Fourteen dollars of *direct, tangible* results for every dollar expended in research. Looks like they might call it a gilt-edged investment!

The New Route to Dividends

Edward R. Weidlein, Director of the Mellon Institute of Industrial Research, where so many industries support scientific investigators to work on knotty problems, recently

Left—Students from the Baking Industry operate a model bakery at Siebel Institute of Technology. The student in the foreground who is taking the temperature of his batter is not likely to lapse into the rule-of-thumb methods of his grandfather.

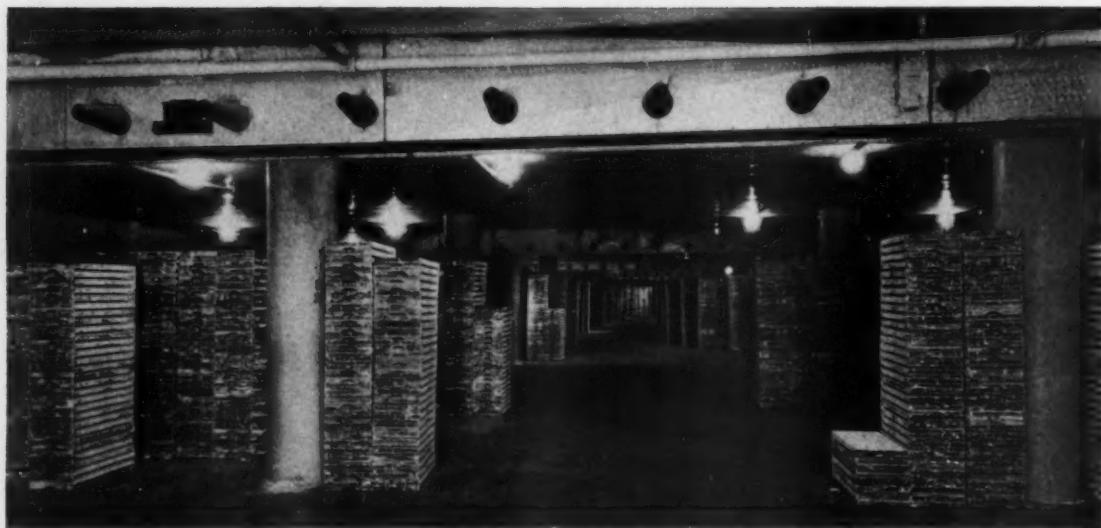
Below—Checking and scoring the finished product is not neglected in these up-to-date industrial training courses.

gave other practical examples of what research is doing for organized industry.

"The Forest Products Laboratory at Madison, Wis., is saving \$30,000,000 annually to American Industries by the work which it has carried out. The perfection of the X-ray tube is the nucleus of an annual business, including accessories and generating apparatus used in X-ray work, of from five to ten million dollars a year.

"A prominent baking company initiated a research which led to the discovery of a product which saves American, Canadian and British bakers not less than \$40,000 a day, without detriment to the quality of the bread. And so the record goes on.

"Great economies are constantly
(Continued on Page 47)



Department-ized air conditioning. Each department conditioned to its individual requirements. A starch room installed by Carrier.

Candy Machinery—Model 1929

A Review of the Year's Progress in American Machinery Development

By BLAIR MACQUEEN

MN THIS "Machine Age" in which we live we have found through careful application of machines and production methods we are able to constantly improve the quality of our products, at the same time lowering their cost. By this means we continually remove things from the luxury class and make of them necessities.

This high degree of industrial efficiency is made possible by two things—development of new machines which improve or speed up present methods, and process research, the development and application of new principles which almost overnight antiquate our previous methods.

The candy industry having come through a rather lean period, manufacturers have been reluctant to make any more equipment additions than have been absolutely necessary.

Machines Ahead of Industry

Today the machinery manufac-

(THE MANUFACTURING CONFECTIONER does not assume responsibility for recommending the machinery and equipment herein discussed over other machinery and equipment not specifically mentioned for want of space or more complete information.—Editor.)

turers have moved ahead of the industry. To preserve themselves they have been compelled to make constant improvement in their machines. Contrasted against this excellent source of supply, we find poorly equipped candy plants in the majority. It is safe to say that the average candy manufacturer today could, through intelligent replacement of machines, replace all of his major equipment in five years' time, have it paid for, and producing a

profit for him, which is not possible under present conditions.

Examples of the use of poor equipment are innumerable. We find manufacturers trying to produce a commercially acceptable grade of marshmallow who use—instead of a good double action beater—a regulation cream beater, bread mixer or a home made affair. They ask their supply man for a new formula and then condemn the product of that formula because the product as they turn it out does not come up to the product of a properly equipped plant.

The best of materials in the world can be spoiled by poor cooking, cooling, beating, pulling, coating or wrapping equipment.

In presenting a review of current machinery development it would be most gratifying if it should spur the rehabilitation of some of our backward factories. It would be a boon to the entire industry if each manufacturer would say, "I will equip

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my factory so that no one will be in a better position to make good candy than I."

A revolutionary step in the art of *cooking* is the Baker-Clay Cream Making Plant. Because it is a noteworthy achievement, much space has already been devoted to it in previous issues and we shall cover it here as quickly as possible.

Simple Explanation of an Intelligent Process

The sugar and other basic ingredients are melted in a pre-melter and the resulting syrup run into a storage tank. It is then pumped to a continuous cooker from which it is discharged on to a cooling drum.

Before reaching the drum, some of the hot syrup is *by-passed* to be used as a "bob." The main portion goes from the cooling drum to a four cylinder continuous beater. The resulting fondant goes from the beater through a mixing worm where it is combined with the "bob." A frappé kettle is used to mix the other ingredients. The fondant goes from the first mixing worm into a second, where it is combined with the mixture from the frappé kettle. The temperature of the second mixing worm is thermostatically controlled so that the finished mixture can be pumped to the depositor at the proper temperature. One-half hour after the centers have been cast they can be removed from the starch and delivered to the coating machines.

In the *cooking of hard candy*, the two most widely used cookers are the Springfield Continuous Cooker and the Simplex Vacuum Cooker. Both machines are highly developed and no changes have been made of late. The major advancements are in new uses for this type of cooker.

Cooking Cream in Vacuo

The Simplex is now used to cook cream, after-dinner mints, salt water taffy, butterscotch and other chewing candies.

The advantage of *cooking cream in a vacuum* is due principally to the physical phenomenon that the more rapid the cooling of a solution, the finer its crystalline structure. After the cream has been cooked to the desired temperature, the vacuum is applied for a period equal to about twice the time taken to process hard candy. Rapid cooling produces a smooth cream of fine crystalline structure. The cream is cooled suf-

ficiently to go immediately to the beater.

There is shortly to come on the market a machine which might be described as follows: It will clean, cool and print starch continuously. Centers are deposited in the starch, cooled while moving, and continuously removed from the starch, thus dispensing with the use of starch trays. The centers are then delivered to the coating machines. It is alleged that this machine will have a capacity of twenty-five thousand to thirty thousand pounds of centers per day.

It is highly probable that this machine can also be utilized to cast caramels, nougat, butterscotch, fudge or any other quick setting center that will run through a depositor.

Two new machines for the *conditioning of starch* have recently come on the market. Both are running in candy factories, and from all reports are operating satisfactorily. They are similar in principle to the one which the industry has been using for the past three or four years.

The savings effected through the use of a starch conditioner make operation without one difficult in

competitive manufacture. The time, space and labor saved, plus the improved product from properly conditioned starch, makes starch conditioning equipment an excellent investment.

More Hand Rolls Per Diem

Progress in the forming of *hand rolls by machine* has been a factor in the constantly increasing popularity of this type of center. The Friend "Leviathan" turns out six thousand pounds of centers per day which are fed directly to the coating machines.

These larger machines are motor-driven in contrast to the earlier machines which were hand powered.

Friend machines are built in five sizes with capacities from 600 lbs. per day up. They will deposit centers from four hundred to one hundred count per pound. Odd shapes may be deposited as well as eggs up to one pound.

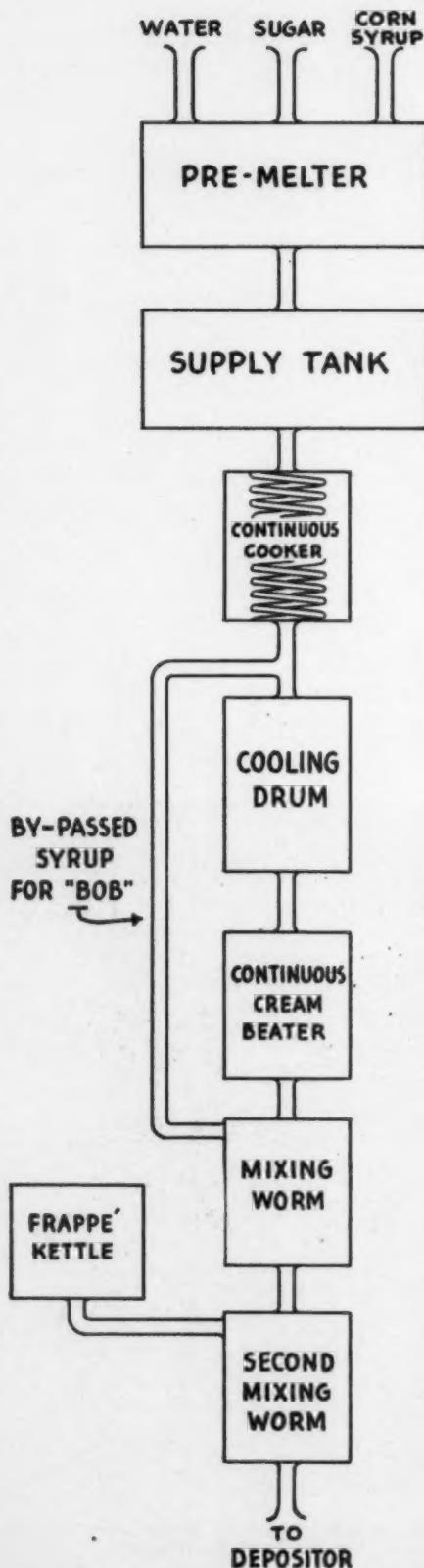
The Friend machine has made hand rolls commercially possible.

Machines are now extensively used in the forming of hand roll centers and many believe the product of these to be superior to the older centers made by hand. The machine-formed center is of uni-



When chocolate and bonbon dipping go "on parade," the confectioner will find the machinists awaiting him. This unit with its automatic temperature control is sanitary and efficient.

CANDY MACHINERY, MODEL 1929



A PROCESS diagram showing sequence of operations in the Baker-Clay Automatic Fondant Process. The raw materials are introduced into the pre-melter in the proper proportions, and run from the pre-melter to the supply tank by gravity. From the supply tank the syrup is pumped to the continuous cooker. Leaving the cooker, a small portion of the batch is by-passed from the main portion to be used as a "bob" and be re-incorporated at a later stage of the process. The main portion of the batch proceeds through the cooling drum, thence into a continuous cream beater where the syrup is converted into fondant. The batch proceeds into the mixing worm, where fondant and by-passed "bob" are combined. A frappe kettle serves for the mixing of color, flavor, frappe, invertase, etc., the resulting mixture being led into the second mixing worm here it joins the main batch in the final mixing.

form size, shape and weight. This facilitates packing and makes a better looking package. Many operators can form a *softer* center by machine than they can by hand.

Chocolate covering machines have been highly developed for several years, and with thermostatic control, removable tanks, automatic feeders, conveying aprons easily removed and all parts quickly accessible for cleaning, there is little room for improvement.

Belt Size Important

One important thing to be considered in the choice of coating machines is the size which can be operated most profitably. Whereas a 16-inch machine will operate efficiently on quality goods where hand-stringing is done, the use of such a machine for the coating of bar goods is not profitable. For the biscuit industry and for bar manufacturers who produce in great quantities, coating machines of unusually large widths have been built.

Generally speaking, a 24-inch machine on straight run stuff will produce twice as much as a 16-inch machine.

Although not strictly a product of the last year, the *automatic bon bon dumper* is of more than academic interest. Where the machine is in operation it is doing the work of eight girls and producing a product which is entirely satisfactory.

This machine handles a small amount of cream fondant which is added in small quantities. In appearance, the automatic bonbon dumper resembles a chocolate coating machine.

To produce chocolate-coated candies of the highest quality it is necessary to cool them under proper conditions. This has been done by passing the product of the coating machines through cooling tunnels into the packing room. The tunnels have been perfectly controlled so that a fine product results.

Some manufacturers of large

quantities of chocolate covered candies now condition the room in which the coaters are located. Instead of using cooling tunnels, the conveyors run through a *cold room which is conditioned*. Longer travel and slower cooling are generally used in this method.

Both systems of cooling are turning out a product which is so superior that what was considered first quality a few years ago is today rejected.

Every Room Its Own Air

New candy factories are now entirely equipped with *air conditioning systems*. Each department receives air of a temperature and humidity best suited to its requirements.

Manufacturers of air conditioning equipment now furnish to the candy industry highly efficient machines which they adapt to any need. Excellent engineering staffs are maintained to serve the industry.

In the new plants, the coating room, cooling room and packing room are all individually conditioned. A new injector method of producing circulation of conditioned air in the starch room is a recent improvement.

Proper humidity control in the hard candy department is becoming almost indispensable.

Through adequate air conditioning the number of operating days has been increased. The planning department may lay out its schedule so that during the period of the year when demand is at a minimum, the air conditioned plant can produce candy to help meet the peak demand and thus do away with much extra help and overtime.

The advance in air conditioning today consists in finding the temperatures and humidities at which the best quality may be obtained.

Progress in Wrapping Machines

A leading packaging machinery firm recently announced a new ma-

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chine—a modification of the soap wrapper which wraps a cardboard "boat" with a transparent paper such as Cellophane. The package is attractive, the contents are in full view, and cartons or "boats" of any shape may be wrapped.

Most wrapping machines have been adapted to handle Cellophane.

The Forgrove Foiling Machine has had some minor refinements made to it and is a very efficient and economical foil wrapper.

Kiss machines are now being used to wrap bubble gum.

In the early stages of wrapping machine development about 80 per cent of the output of this industry was devoted to the candy trade. Today the reverse is true. Other food products, soaps, cigars, etc., furnish the major demand. When one considers the amount of candy alone that is machine-wrapped today, the magnitude of the present-day wrapping machine industry may be readily visualized.

An improvement in the *Racine Sucker Machine* is a feeding device which holds an entire case of sticks which feed directly into the machine. This does away with the old method where the operator was required to continually fill the small hopper feeder by hand.

The most outstanding hard candy machine of the past year makes a "pop" with an "inlay" center.

One large manufacturer of fruit drops is using a new machine to produce his drop with a hole in the center, which is a duplication of his well-known mint.

New Chocolate Equipment

The large *steam-heated conche*, which was first shown at the National Confectioners' Exposition in Chicago last year, has some interesting features. The claims made for this machine are a saving in conching time, easy addition of extra cocoa butter when desired, and a smooth, velvety product. The Baker Rowntree patented agitator prevents packing in the ends of the conche.

The automatic discharge, which is adaptable to any melangeur, eliminates the emptying of the melangeur by hand. Its operation is continuous and eliminates waste and spilling.

Many candy manufacturers have built machines for molding hollow cast chocolate eggs, rabbits, etc. One manufacturer now offers the trade a machine for this purpose called a Double Header. It consists of two wheels, on which are mounted spring clips to hold the molds. The wheels revolve slowly, the spring clips turning at the same time. The motion evenly distributes the chocolate in the mold as the chocolate cools.

Larger manufacturers of chocolate now use a molding machine for their cakes. The machine deposits the chocolate in the mold, and before it is through delivers the cakes to the wrapping machines. It will handle chocolate of any consistency. The cakes are well formed and of uniform weight. The production on half pound cakes is approximately eighty a minute.

Conveyors Cut Factory Costs

One means of reducing operating costs is through an intelligent use of *conveyors*. Although we are not familiar with any new conveying machines, new applications must be considered.

One large candy manufacturer developed a conveying system for his shipping room which saved him fifteen thousand dollars a year. Gravity conveyors ran past piles of stock. A system of loud speakers was used to call off the goods required. These were placed on the conveyor and started to the car. In their travel they passed the checker, where they were checked, stenciled and then elevated by a power conveyor into the car. Contrast this system with that of a myriad of truckers getting in each other's way in order to get at the same stock pile at once.

Many candy factories overlook applications of conveyors which would show a handsome return on

their purchase price every year.

Nineteen thirty promises an unusually large crop of new machines. In addition to those referred to there is promised a combination depositor, which will do away with starch trays. Another manufacturer will have ready a new coater and combination depositor. There is rumor of a machine which will form centers for a coating machine by an entirely new process.

The pace in the manufacture of candy and candy machinery will continue to be a rapid one. Those whose watchword is "wait and see" are likely to fall by the way. This is not an argument for purchasing every machine which on the spur of the moment fits an apparent need, for such a policy would soon give your plant the appearance of a second-hand shop.

However, one should not take too long in deciding upon a machine which will improve his quality, cut his production cost, or lead to greater profits.

Ira B. Lanphier Directs Package Research Laboratory

Package Research Laboratory at Rockaway, New Jersey, announces the appointment of Ira B. Lanphier of Madison, Wisconsin, as director.

In his new capacity, Mr. Lanphier will continue the work of package design and construction that he has been carrying on for several years under John A. Newlin at the Forest Products Laboratory, which is a part of the Branch of Research of the Forest Service, United States Department of Agriculture. His new work and that of Package Research Laboratory will be directed toward cutting container and transportation costs in the shipment of all classes of goods which require boxes or crates for safe transit.

One of his important tasks will be the further development of wirebound boxes, which are growing in popularity because of their light weight, strength, and low cost.

In these boxes, steel wire and staples are substituted for a large part of the wood formerly used, with an average saving of $62\frac{1}{2}\%$ of the weight of wood. This results in the conservation of large quantities of wood, as well as the production of containers of greater flexibility, lighter weight, and equal or greater strength.



1929 in Raw Material Research and Scientific Method

By H. S. Paine

Carbohydrate Division, Bureau of Chemistry and Soils, Washington, D. C.

FIT IS DIFFICULT at such an early date to forecast the influence on the candy industry of scientific advances of the past year. In fact, new knowledge is quite often difficult to analyze in the making. Sometimes advances in knowledge arouse great hopes and expectations of important applications which do not materialize, whereas in other cases apparently insignificant discoveries have very important results. Thus, the early laboratory observations on the relation between light energy and the electric current in photoelectric cells gave very little basis for forecasting the development of television. The writer will confine himself to discussing a few of what he believes to be the most important topics, and trusts that he may be able to present a fairly adequate picture of recent scientific progress from the standpoint of its probable benefit to the candy industry.

The Graying of Chocolate

Solution of the problem of preventing graying of chocolate is the most important research task now confronting manufacturers and distributors of chocolate confections. Much attention has been given to this problem and some progress has been made. Discussion of recent developments will be omitted here, however, since this is to be the subject of special articles in early issues of this journal.

Dextrose Candies

Considerable advance has been made in the use of refined dextrose in candy. Dextrose may now be used in any required proportion without the constant presence of dextrine with which it is associated in corn sirup, or of levulose which accompanies it in invert sugar sirup. Also it is now possible to produce candies in which, to use a chemical term, dextrose appears in the "solid phase," i.e., it is present in the can-



Dr. H. S. Paine

dy in crystal form and is primarily responsible for the structure of the candy, instead of being present solely in solution, as formerly.

The peculiar properties of dextrose crystals have an important bearing on the structure and consistency of candies in which this sugar appears in crystal form. Dextrose crystals of the usual type appear as cauliflower-like masses or clusters of exceedingly smooth consistency. Even when somewhat too large, they are still smooth to the tongue, whereas over-size cane sugar crystals in ordinary fondant cause a granular feel.

The physical and chemical properties of dextrose are distinctly different from those of cane sugar (sucrose). Dextrose is a "simple" sugar and is not subject to inversion, that is, to the action of so-called "doctors" such as invertase, acids, and acid salts such as cream of tartar. It is only about one-half as sweet as sucrose and is less soluble in water. Consequently, since the sirup present in fondant is always saturated with the sugar that constitutes the "solid phase" (present in crystal form), it is possible to have dextrose in crystal form in dextrose fondants with relatively less dextrose dissolved in the sirup ("liquid phase") than with ordinary cane sugar fondants. Thus one can take advantage of its desirable crystal properties without

having an excessive quantity in solution in the sirup of the fondant, and cane sugar or invert sugar can also be present in the sirup, if desired, to increase sweetness.

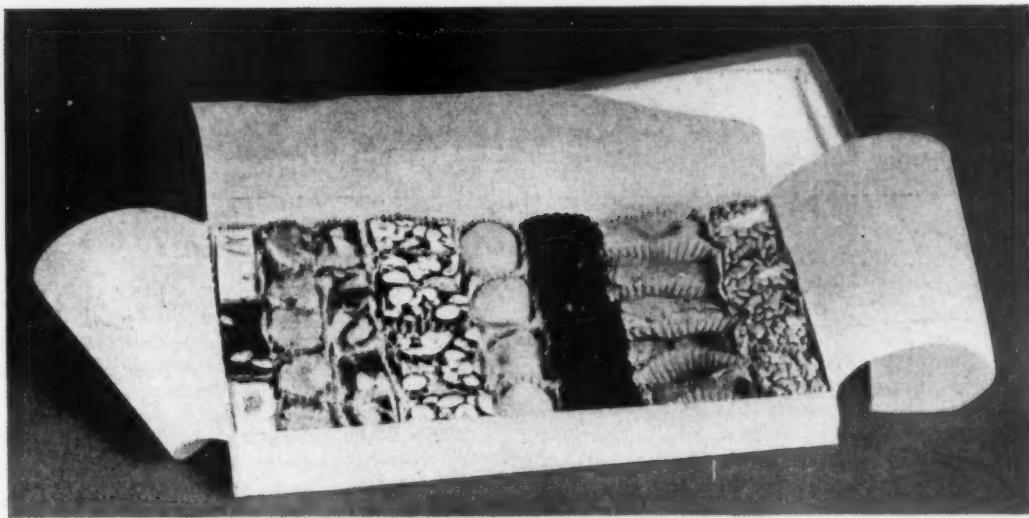
Moisture a Factor in Dextrose Stability

An interesting property of dextrose is the fact that its coefficient of solubility with change of temperature is higher than that of cane sugar. That is, while the solubility of dextrose is less than that of cane sugar, its solubility increases relatively faster with rise of temperature than does that of cane sugar. This, together with the fact that the crystalline dextrose now being generally sold contains "hydrate" water (a molecule of water chemically combined with each molecule of dextrose), necessitates the use of very little water in making up a batch of candy in which a substantial proportion of refined dextrose is used. This hydrate water "splits off" upon heating and assists in dissolving the dextrose.

Dextrose lends itself well to "cold process" candies, i.e., those which are cooked to a temperature below the boiling point. When the batch cools after being cooked and crystalline dextrose separates, the hydrate is re-formed (at temperatures below about 122° F.), and the evaporation of an excessive amount of water in cooking the batch will leave an insufficient amount for hydrate formation. Consequently it is not necessary to boil off such an excess of water as when cane sugar is the predominant sugar. Failure to keep this property in mind is likely to result in candies of a hard, granular consistency. The water present in hydrate form is not apparent to sight or feel and does not contribute to apparent moistness.

Stay Fresh Longer

A mass of dextrose crystals, as in dextrose fondants, has greater absorptive capacity for holding



Dextrose candies contain more moisture than their appearance indicates. Such candies retain moisture tenaciously over long periods and may prove to be the answer to longer shelf-life on uncoated varieties.

liquid than the harder and more compactly massed cane sugar crystals in ordinary fondant. Dextrose fondants contain more moisture than their appearance indicates. Such candies retain moisture tenaciously over long periods.

Candies containing dextrose in the solid or crystalline phase produce a sensation of coolness on dissolving in the mouth. This is due to absorption of heat caused by solution of the dextrose. Conversely, heat is liberated upon crystallization. Dextrose does not crystallize as readily as cane sugar; therefore "seeding" or addition of dextrose crystals or some previously made dextrose fondant is more important in the crystallization of a batch than is the addition of cane sugar in ordinary fondant or grained candies.

Our increased knowledge of the principles governing the structure and consistency of candies, and the fact that the physical and chemical properties of dextrose are in general well understood enable us to predict with considerable accuracy the behavior of dextrose in candy. Rules for its use may be laid down without depending on rule-of-thumb experimenting. This is an excellent illustration of the recent application of scientific knowledge to candy making. On the other hand, the use of cane sugar in candy goes back many years to a period prior to adequate scientific knowledge of

the properties and behavior of cane sugar. It was therefore necessary to work out methods for the use of cane sugar in candy making by rule-of-thumb and find a scientific explanation of its behavior afterward.

Refined Cane Sugar in Sirup Form

Although refined cane sugar in sirup form is not a new sugar, it is an important development of the last year and can properly be classed as a scientific achievement, since it has resulted from increased knowledge of the application of decolorizing carbons to the refining of raw sugar. The transportation in tank cars and tank trucks of refined cane sugar in sirup form has now passed the stage of being a novelty. It affords economies such as saving of sacks, reduction of waste, and easy transfer by pumping from tank car or tank truck into factory tanks located on an upper floor from which the sirup can be drawn by gravity through suitable pipe lines to the cooking kettles. In this way cane sugar sirup can be handled in the same expeditious manner as corn sirup by simply turning a valve.

Cane sugar in this form has so far been used principally in the ice cream, preserving and beverage industries, but with continued investigation and improvement in refining the day is probably not far distant when cane sugar sirup of suitable

quality for all purposes will be available to the candy industry.

Honey Research Progressing

It is well known that the finest grades of granulated sugar can be heated to temperatures as high as 330° F. with the production of only slight color, whereas lower grades of granulated sugar darken considerably. These differences in granulated sugar are due to variations in the exceedingly small proportions of non-sugar substances or "impurities," and the fact that these "impurities" accelerate the decomposition of the sugar on heating. The tremendous influence of these "impurities" is realized from the fact that 99.6 to 99.9% of ordinary granulated sugar consists of the single chemical compound cane sugar (chemically known as sucrose).

In the case of saccharine materials such as honey which contain a much greater proportion of non-sugar substances, the opportunity for reactions that produce discoloration upon heating are much greater. In using the word "impurity" it should be kept in mind that these non-sugar substances are normal constituents of honey and therefore, strictly speaking, should not be regarded as impurities.

The pronounced discoloration resulting from heating honey is well known to candy makers. However, the fact that honeys differ greatly in this tendency toward discolora-

RAW MATERIAL RESEARCH

tion and modification of flavor on heating is probably not so well known. This difference in honeys is apparently due to variation in the percentage of levulose and in the character and proportion of non-sugar substances present.

Segregating Honeys by Physical Characteristics

Undoubtedly there are a number of types of domestic honey which are considerably above the average in their ability to withstand heat, but on account of the custom of blending honey, especially for table use, many of these honeys are mixed with other honeys of less desirable characteristics from the candy making standpoint. Also, in the absence of any special incentive to the honey producer to separate honeys of different flavors and characteristics, he usually allows them to become mixed in the comb, instead of centrifuging the honey as soon as flow from one floral source stops and another commences.

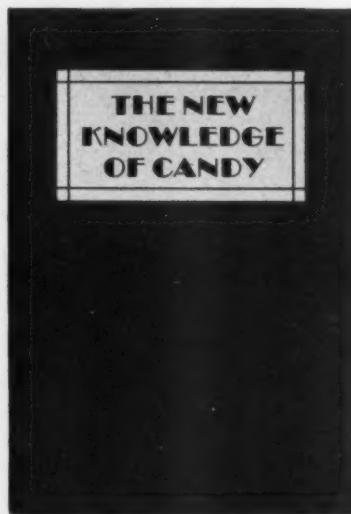
An investigation has been undertaken recently by the Carbohydrate Division for the purpose of studying the various types of American honey with regard to their composition, behavior on heating, and suitability for various purposes. This investigation should result in locating domestic sources of supply of honey of individual character, especially suitable for use in candy. Tests will be devised whereby such honeys can be readily detected.

Honey-Dextrose Combinations

Since dextrose is one of the principal sugars of honey, there is good opportunity for applying the scientific knowledge of dextrose fondants, as discussed in a preceding section, to the production of honey-dextrose candies. Such candies can be readily made by first making a stiff dextrose fondant, say, from 20 parts honey, 16 parts refined dextrose, and 1 part water. A honey-dextrose cream may then be produced by mixing about 1 part of the stiff fondant with 1 part or any other desired proportion of honey, the mixture being heated only to the comparatively low temperature required for complete mixing. The proportions of honey and stiff fondant can be varied as desired, and in view of the low temperature employed, an individual and characteristic honey flavor can be obtained

instead of the usual nondescript, "just honey" flavor characteristic of most honey candies.

There is need for further investigation with regard to manipulation of batches so as to facilitate introduction of honey at a lower temperature in different kinds of candy. These kinds of candy may be either "ungrained" or "grained," and may contain either dextrose or cane



Publicity relating to the nutritive value of candy has represented a new consciousness on the part of the candy industry of the applicability of present knowledge rather than an increase in this knowledge itself.

sugar in the solid crystalline phase. Such development, together with more extensive knowledge regarding the behavior and suitability of honey of different types, should contribute to greater use of honey in candy.

Spread of Knowledge Concerning Nutritive Value of Candy

Considerable advance has been made in recent years in the knowledge of human nutrition and metabolism. However, the publicity during the last year relative to the nutritive value of sugars and carbohydrates in general has represented a new consciousness on the part of the candy industry of the applicability of existing knowledge rather than an increase in this knowledge itself.

The carbohydrate constituents of candies are distinctly predominant, although many candies contain a

substantial proportion of fat. The protein constituent is relatively small. The nutritive value of candy is determined very largely, therefore, by its carbohydrates, although the other constituents are by no means negligible. The carbohydrates used present an attractive variety, consisting principally of the sugars sucrose, dextrose, levulose and lactose, together with starches and dextrins and some gums. Increasing attention has been given to the function of sugars in relation to normal oxidation of fats by the human organism, and especially to the prevention of the acetone type of acidosis, which is due to incomplete oxidation of fats in the absence of a sufficient supply of carbohydrates.

The raw materials used in candy are of great variety and cover a wide field of importance from a nutritive standpoint. The carbohydrates of candy have high caloric value and are an important source of energy. The sugar constituents especially represent a source of energy which becomes quickly available after the candy is eaten. The attractive and appetizing appearance of candy to the eye, together with its high nutritive value, justify giving it an important place in the diet.

Current Fumigation Practice

Insect infestation of nuts is one of the serious problems confronting the manufacturer of nut candies. A solution of this problem is important in view of the popularity of nuts and the increasing variety which has become available for use in candy in recent years.

Increasing attention has been given to means and methods of fumigation for the purpose of controlling insect infestation. A variety of fumigants are available, and the selection of a successful fumigant has attracted attention to the various factors which must be considered. Among these factors are the toxicity of the fumigant, its danger to man and other animals, odor, explosiveness, inflammability, penetrating power, retention of the fumigant by the nuts or other food products, and the solubility or solvent action of the fumigant with respect to fats and oils. Certain fumigants cannot be used with oily nuts, such as pecan, cashew, and Brazil nuts, on account of the solvent action and retention of the fumigant by the

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nuts. In the case of other fumigants, other factors present difficulties.

It is impossible to forecast the final practice at this time. However, hydrocyanic acid is being used in numerous instances with apparently satisfactory results, in spite of its well-known lethal action. Ethylene oxide is a fumigant which has come to the fore recently and gives promise of important application. In view of the impetus already gained, important advances in the knowledge of fumigation and adaptation to products of varying character may be expected.

Moisture Control Assumes Important Aspect

Water is an exceedingly common substance, but commands great respect in candy making, since most problems of deterioration of candy result from lack of stability of moisture content. The ideal candy from this standpoint is one that will neither gain nor lose moisture. In the absence of rancidity of fats, fermentation, and the like, such a candy would remain perpetually "young" and fresh, and would never age. The writer is not willing to predict a complete solution of this problem, but he believes that important progress is being made and

that a control will be established in the near future which will represent a great stride forward. Moisture content, packing, and proper storage represent a trilogy of vital importance in the control of stability of candy. Moisture may be lost by direct evaporation to the atmosphere or it may be absorbed from the atmosphere, or it may be redistributed in the candy by evaporation into the closed atmosphere of the package with subsequent condensation on the surface of the candy. In any case, the stability and quality of the candy are impaired.

The solution of proper moisture control in candy from the time of manufacture to the time of consumption is to be sought along one or both of two lines: (1) making the candy more resistant to change in moisture content, or (2) by controlling the humidity and temperature of the atmosphere surrounding the candy. Effective solution will doubtless result from a combination of endeavors along both lines, but at the present time greatest progress has been made in the second direction.

Packaging as a Means of Moisture Control

The two all-important factors in stabilizing moisture content are tem-

perature control and humidity control. Packaging is the first step toward moisture control after the candy leaves the factory, and represents essentially an endeavor to stabilize the humidity factor, but as ordinarily carried out does not affect the temperature factor. Candy may be packed in air-conditioned rooms, so that the air in the package is of the desired relative humidity, and the packages may, if desired, be made air-tight, so as to retain this air and prevent interchange with the outside air. This, however, is only a temporary expedient. With candies of higher moisture content, especially, increase in temperature causes evaporation of moisture, with the result that the atmosphere surrounding the candy in the package becomes saturated with moisture; a subsequent drop in temperature then causes deposition of moisture on the surface of the candy in a manner similar to the deposition of dew. The tighter the package, the more extreme is the result.

Candies of high moisture content which are not protected by some kind of coating of low permeability to moisture constitute the greatest problem. These require "breathing space," so to speak. However, this breathing space becomes a distinct detriment when the outside air is of

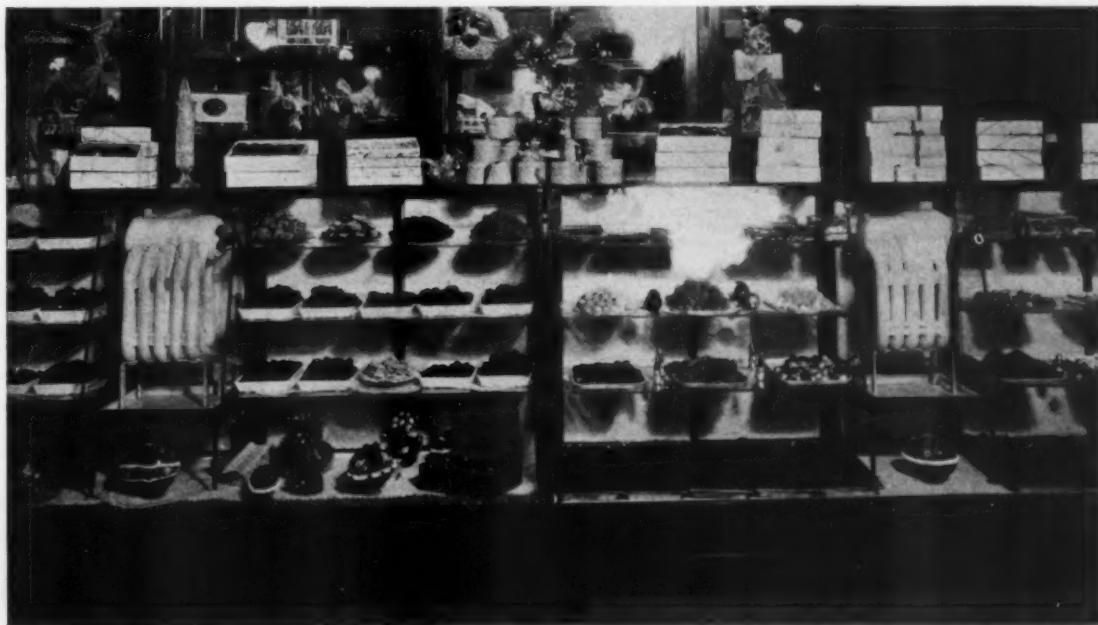


Photo courtesy Frigidaire Corp'n.

Not only is automatic refrigeration in retail show cases important for temperature control, but frosted coils visible to the consumer also assist, by association of ideas, in conveying to the consumer that candy may be cool instead of heating and repellent in hot weather.

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higher relative humidity than the air inside the package and is, in any case, merely an expedient to make the best of a predicament. Other conditions being equal, the more limited the air space in the package the more quickly it becomes saturated with moisture when the temperature rises.

Air Spaces Lead to Difficulties

This is also illustrated in the case of candy pieces which are individually wrapped, for instance, with foil or moisture-proof paper. If the foil or paper does not fit tightly around the piece at every point, the small air space between the wrapping and the candy may become quickly saturated with moisture as a result of a relatively slight increase in temperature, thus causing sweating with relatively small temperature fluctuations. Thus the wrapping of certain types of candy, if not properly done, may be more of a liability than an asset. On the other hand, if the wrapping makes close and continuous contact at every point, air is eliminated from contact with the piece.

The problem of control of moisture content relative to stability presents a most important subject of investigation and one which so far has hardly been touched. Included in the investigation of this problem would be the determination of the equilibrium point or relative atmospheric humidity at which each important type of candy is stable at various temperatures, i. e., where it loses or absorbs moisture at a negligible rate. This equilibrium point is influenced by various factors. For instance, one of the expedients now used is to increase the temperature to which the batch is cooked in hot weather. This not only reduces the initial moisture content but also modifies the physical structure of the candy. Variation in the proportion of different ingredients may also have an effect upon moisture equilibrium. Thus, the addition of fats and colloidal substances such as gelatin, which have a "water-binding" property, may readily influence moisture stability.

Establishing Range of Moisture Equilibrium

An outgrowth of such an investigation should be a reasonably accurate determination of the range of temperature and humidity conditions at which candies of different types

are in moisture equilibrium or approximately so, and a knowledge of the manner in which this range can be influenced by the addition of substances such as fats and water-binding ingredients. A further result would be a sufficiently accurate determination of the proper degree of closure of packages suitable for candies of various types and the drawing up of specifications which could be readily interpreted in terms of different specific kinds of packages. If our knowledge of the conditions affecting moisture equilibrium ever reaches this point, as may be anticipated in the future, this can be made one of the considerations in selecting ingredients, drawing up formulas, etc., for any given kind of candy, although it must of course always be reconciled with the factors of attractive appearance and palatability. Here is an important and fruitful field of investigation regarding which there is practically no accurate and precise knowledge at the present time.

Refrigeration and Temperature Control of Wholesale and Retail Stocks

As already explained, there is great opportunity for substantial improvement in stabilizing moisture content by temperature and humidity control, as well as by modifying the composition and methods of manufacture of candy. In fact, important strides have already been made in this direction. The great advances in refrigeration engineering during the last few years have made automatic refrigeration available to the candy industry as well as to the housewife. Candy, while by no means a highly perishable food product, may well be regarded as perishable with respect to preserving an attractive appearance. If foods such as butter, eggs, milk, certain vegetables, and delicatessen items enjoy the benefits of refrigeration, candy may certainly lay claim to some consideration along this line. Automatic refrigeration is now becoming a commonplace and is met at every hand, having expanded tremendously from its original industrial uses.

Increase in air conditioning of candy factories makes the necessity of this next step all the more urgent. Except in case of candies of very low moisture content, such as hard candies, which may be packed in airtight containers, it does not avail

greatly in the long run to place air of definite humidity in the candy package, unless there is some sort of guarantee that this humidity control may be perpetuated after the candy leaves the factory. Candy from this point on is more or less at the mercy of the weather. Temperature and humidity control of reserve stocks and of retail displays in showcases is a very important supplement to air-conditioning of the candy factory. A great development along this line, which will solve many problems, may be expected, especially if humidity control is still further elaborated in connection with the present installations for temperature control.

Associating Candy with Coolness

Automatic refrigeration in retail candy showcases and show windows is not only important for temperature control, but frosted coils visible to the consumer also, by an association of ideas, carry conviction that candy may be cool instead of heating and repellent in hot weather. This bit of psychology may have far-reaching results and, together with perpetuation of the fresh, attractive appearance of candy, may go far toward stimulating candy sales during the slack summer period. Temperature control is especially important in maintaining the gloss and the desirable "snap" of chocolate. Spoilage should also be greatly reduced.

If candies of different types are placed together in storage rooms or retail showcases of controlled temperature and humidity, an important question is at once raised regarding the varying tendency of different candies to absorb or lose moisture at this common atmospheric temperature and humidity. In most cases this must be solved by selecting temperature and humidity conditions representing as near a "common denominator" as possible. If this can not be done exactly, it should at least be possible to reduce the rate of absorption or loss of moisture from the candies that are furthest from the "common denominator" to such an extent that no damage results unless storage is greatly prolonged.

Proper Acclimatization Needed

Assuming that the candy has been properly safeguarded up to the point where it is sold by the retailer, another gauntlet yet remains to be run.

This may be of very short duration or not, depending on how soon the candy is consumed. An obvious precaution is the avoidance of condensation of moisture in removing the candy from humidity—and temperature-controlled conditions for delivery to the purchaser. This means that, in hot, humid summer

weather the temperature in the retail showcase should not be too low, say, not below 70° F. Furthermore, it is highly desirable that the humidity be controlled. With proper control of humidity, the temperature of the showcase might be even higher, especially for certain kinds of candy.

It is apparent that means for solv-

ing the problem of moisture control, packaging, and storage are not restricted to one path. Important advances have already been made, and the writer believes there is no doubt that by using the variety of means available the problem will eventually be solved to a very satisfactory degree.



Let's Build a Real Candy Institute!

(Continued from Page 37)

being effected in manufacturing, new products are being discovered, and novel uses are being found for old products. It is not surprising to learn, therefore, that about \$50,000,000 is being spent annually by American manufacturers in carrying on chemical laboratory research. No doubt a like amount is expended in experimental and development work in plants; that is, beyond the laboratory stage.

It would be hard to find a more practical or hard-fisted set of men than those in the ice cream industry. They get results. The increase in per capita consumption of over a third in ten years speaks much louder than mere words. Now who would think that playing around in a laboratory with a microscopic "bug" called *Clostridium botulinum*, would do the ice cream maker any good?

Preparedness!

A. C. Dahlberg, chief in research of the dairy division, New York Agricultural Experiment Station, tells what the chemists found to hang on Clossey and his tribe:

"It is known that milk and many of its products are ideal foods for micro-organisms as well as for man. Spores of *Clostridium botulinum*, the bacterium which produces the most deadly known poison, are widely distributed and are given an ideal opportunity for growth in many dairy products, even though they require anaerobic (lacking air) conditions.

"Sherman, Stark and Stark of Cornell University have sought the explanation of the well-established fact that dairy products rarely, if ever, cause botulism. . . . When milk and its products are held at cold temperature, *Clostridium botu-*



Cornell is another of the great institutions which lends a hand in training the personnel of the ice cream industry. (Dairy Department, New York State College of Agriculture.)

linum cannot grow; and should the temperature be warm enough for growth, the lactic acid and bacteria destroy their toxic properties. Milk products have been amply protected against this otherwise dangerous bacteria."

Now it is well worth noting that the ice cream and other dairy products men were not content with the "well-established fact that dairy products rarely, if ever, cause botulism." They had a scientist find out why.

Suppose some food faker or some

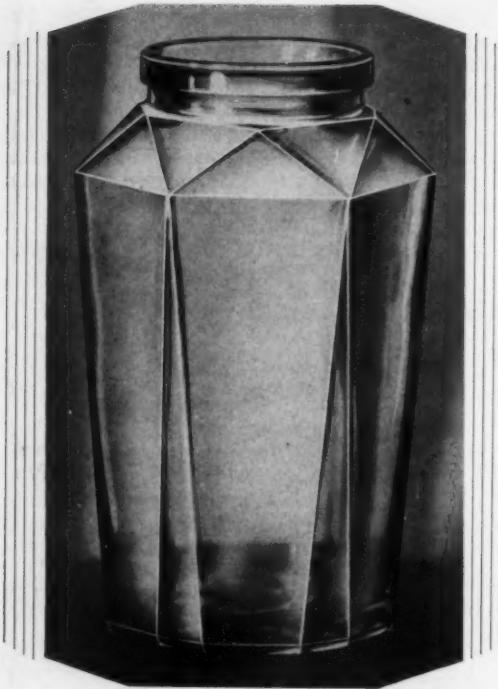
competing industry, intent upon getting in some dirty licks for selfish reasons, were to start a campaign warning the public against possible botulism poisoning in ice cream and similar products. How far would they get against an elaborate defense of scientific facts such as this?

Millions for Defense

Which brings up an important point with regard to organized Institute research; namely, its value in defense as well as its more calculable benefits in merchandising. The spectre of botulism had haunted and almost ruined a couple of other industries. The dairy people saw to it that it would never become a menace to theirs.

So for such defense purposes alone scientific research is today worth far more than its cost to any industry. Never has there been such a continuous warfare for the consumer's dollar. The industry that is in possession of not only the strong points of its own line but also the weak points of its possible attackers, stands an excellent chance of being left strictly to its own knitting.

(We knew you would follow this through to the end. Red hot stuff, isn't it? But it gets hotter as the story goes on. It took a lot of courage to say what this author has said. And a lot more thinking. What's that you say? The N. C. A. appropriated \$10,000 for research? That will pay for the concrete footings. Who'll put up the money for the walls? Read how your competitor industries are doing it in next month's issue!—The Editor.)



A glass candy jar conceived and designed by one of America's foremost commercial artists.

CRY this out on your Remington Portable," hissed a voice beside me. Glancing up timidly, my direst suspicions were confirmed. There stood our venerable Editor, scowling as usual, and with a devilish glint in his one good eye. Automatically my hand went out for the inevitable sheaf of papers. "More work!" I thought, and I must have gnashed my teeth loud enough for him to hear. "Yes," he snarled, translating my thoughts, "more work—see that you have it ready in the morning!" With that he turned on his heel and stamped out of the room, stirring up a cloud of dust behind him.

I proceeded to decipher his handwritten note which was attached to the papers in front of me. It read, "Prepare review of the year's development in packaging." Thrilling. Reluctantly, I reached for the telephone and canceled an appointment with the dentist that evening in order that you, dear reader, might profit by my ponderous thoughts on candy packaging.

In preparing a review of this nature it is difficult to resist the temptation to delve into the technological

The Twelve-month in Packaging

To satisfy present-day tastes requires the combined skill of experts from many and varied fields

By R. WILSON WILMER
Assistant Editor

aspects of the subject—to trace historically the development of the package from the day of our earliest ancestors (probably dried leaves, grass and animal skins were used by primitive man in the remote ages to protect his food supply), on through the more highly developed cultures of the Chinese, Egyptians and Greeks, and continuing on up to our present era of modernistic and contemporary packaging. Obviously, even the barest outline, however interesting, would require so much space as to preclude discussion of its more practical aspects, namely, the developments in packaging methods, design, raw materials, etc., which have been introduced to the candy industry during the past year.

Containering Requires Varied Talent

Commodity packaging has developed to a point where it requires the combined efforts of engineer, artist, manufacturer and artisan. Present-day needs are not easily met. Practical utility, structural sturdiness, protective and visual qualities, not to mention attractiveness in design, are only a few of the qualifications

demanded of a container in this highly exacting age.

Perhaps the most noticeable trend in the packaging of foodstuffs, and this of course includes candy, is the desire for greater visibility. There is something in seeing a product before buying it that makes for greater sales of foods so displayed, especially if while open to view, they are at the same time protected from contamination. In our industry, Cellophane, waxed glassine, glass and other transparent materials have met this growing need. Glass, the old standby of other food industries, has just recently reflected on the possibilities of more extensive application in the confectionery field. One glass concern has even gone so far as to engage the services of a commercial designer and artist—one of America's foremost—to create new patterns that will remove their glass containers from the realm of the prosaically obscure and elevate them to the level of things artistically distinctive. Others are bending their efforts in a similar direction to meet the demand for specially designed glass candy containers which it is expected will materialize as was the

THE MANUFACTURING CONFECTIONER

case with Cellophane, during the past two years. It will be interesting to watch this trend—interesting to see how the glass manufacturers follow up the advantage accorded them by the momentum which this movement has already received.

Metal Packages with a Future

The metal container people are, of course, fully alive to their problems. New and more beautifully designed confectionery boxes are being introduced to the consumer with increasing regularity. By virtue of their greater cost, these packages are confined mostly to the higher-priced confections.

One development of unusual interest in this field is the introduction during the past year of a decorated and embossed, hinged cover brass candy container. It provides real utility and decorative value after it has fulfilled its original purpose. Its value in this respect is apt to be particularly appreciated by the

ladies and it therefore possesses unusual merit as a gift package.

Pleasing combinations of color and design are becoming the accepted requisites of every sort of candy container. Upon these two factors depend the package's distinctiveness and salability. A Boston candy manufacturer departed from the accepted traditions by introducing a package predominantly black. Hitherto, candy people have invariably shied at black, possibly because of its sombre associations. It is apparent that they have overlooked an important fact. Black associated with almost any other color adds tremendous punch to the combination. In a window filled with many and vari-colored packages, a black package stands out in startling contrast. Since the introduction of a black package by this concern, a number of other manufacturers have taken the cue, realizing the display value of this formerly tabooed color, and have brought out black

packages of their own.

One Firm's Research Activities

A foremost manufacturer of corrugated cases and folding cartons takes for granted the necessity for the application of good design even in a product such as theirs which is seldom accorded aesthetic consideration. One of the significant advances made by this concern is the development of a moderately-priced rigid cardboard container formed on simple machinery from excellently designed blanks, the output regulated to meet the requirements of the packing room. Of possibly greater importance from the standpoint of general serviceability are the moisture-proof caddy for the preservation of fondant, containers insulated for use in connection with dry ice, box boards impregnated to resist oil, sugar and water, and asphaltum treated, interlined cartons for the preservation of taffy, hard candies and brittle goods—all the

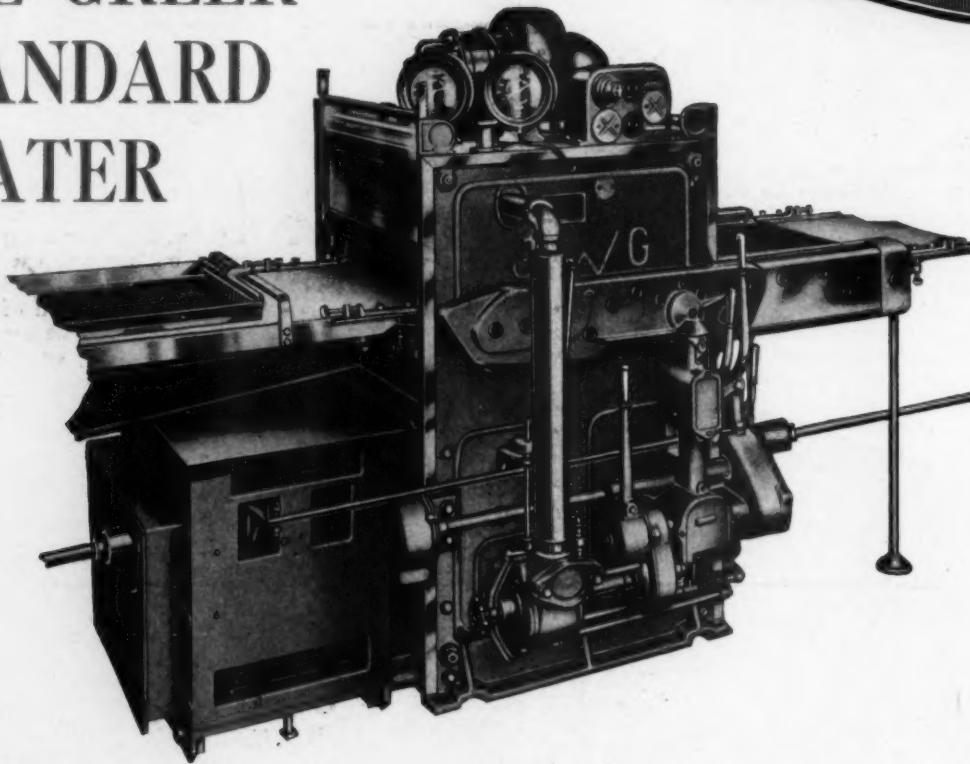
(Continued on Page 70)



Among the elite of candy containers, these brass, hinged-top boxes bear a certain unmistakable quality of richness and refinement. Simple in pattern, with designs beautifully inlaid with color, their value as gift packages is at once apparent.

**ACCURATE and Uniform
Coating and Cooling mean
GREATER profits . . .**

**THE GREER
STANDARD
COATER**



There are doubtless many ways of increasing profits yet one of the most obvious ways is usually very reluctantly used—the replacement of obsolete machinery with the latest and most efficient available.

The manufacturer who can produce the best coated goods with the least Labor, Material and Waste is going to win out in the long run.

Are you operating your Coating department under a handicap? If it is not equipped with Greer Coaters you are! The Greer Coater is noted the world over for its accurate and uniform coating, its large output of high quality goods, its remarkable freedom from mechanical troubles—hence small upkeep,—and its ease of operation.



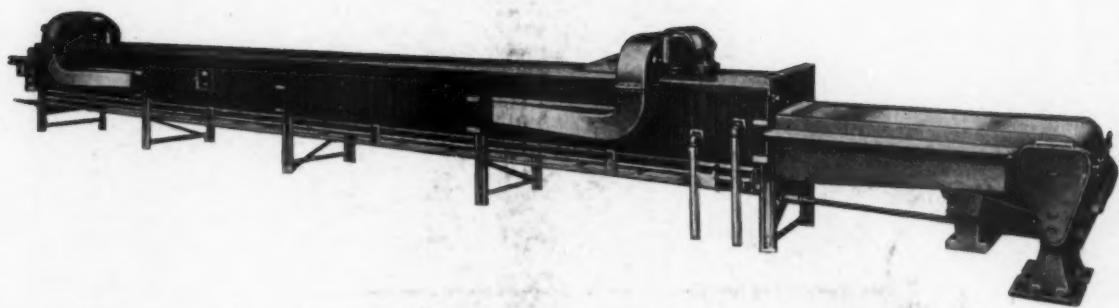
J. W. GREER CO.
Manufacturers of Confectionery
Machinery that Pays Dividends

119-137 Windsor Street

CANADA



UNIFORM COOLING Irrespective of Weather Conditions



GREER COOLING TUNNEL

In order to be classified as a good chocolate it is necessary for a center to be good in the first place, and then it must be coated and cooled correctly. A wonderful center can be absolutely ruined by imperfect coating and cooling or it can be made into a product of which you can justly be proud. Is it wise to take a chance when you can be certain simply by coating and cooling your centers on Greer machines?

The J. W. Greer Co. has specialized in chocolate coating and cooling equipment for several years. Many of the leading confectionery manufacturers have found that the installation of Greer Coating and Cooling machines has eliminated their troubles.

The results we have obtained for others justify our assurance that we can help you.

You incur no obligation by asking for our assistance.

ER COMPANY

ers of Confectioners'
that Pays Dividends

CAMBRIDGE, MASS.



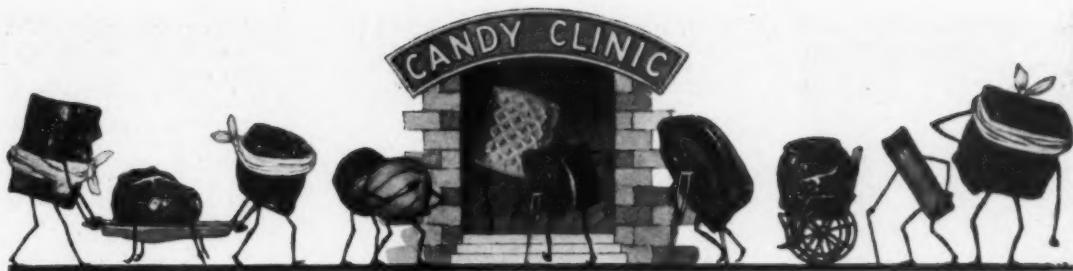
TWELVE-MONTH IN PACKAGING



A novel arrangement of gum paste candies available in a variety of patterns and colors. Note how the cross-stitch motif is repeated on the cover and side panels.



The distinctive feature is inside. See illustration to the right.



The Candy Clinic is conducted by one of the most experienced superintendents in the candy industry. Each month he picks up at random a number of samples of representative candies. This month it is new and novel packages; next month it will be holiday assorted chocolates and hard candies. Each sample represents a bona-fide purchase in the retail market, so that any one of these samples may be yours.

This series of frank criticisms on well-known, branded candies, together with the practical "prescriptions" of our clinical expert, are exclusive features of the M. C.

A Search for the New and Novel in Candy Packages

(Which is a harder job than it looks!)

Code 12A 29

Novelty Package—Cubes of Gum Paste Arranged in Cross Stitch Pattern, 1 lb.—\$1.00

(Purchased in a suburban gift shop, Port Washington, L. I.)

Appearance of package: Simple and attractive, wrapped in yellow Cellophane.

The Box: One layer, tight-wrapped. Wrap of Nile green shade with lettering in darker green following cross stitch motif which is carried out splendidly throughout package.

Appearance of package on opening: Excellent. The entire contents of this package is made up of $\frac{3}{4}$ in. cubes of a gum paste similar to gum drops. The pieces are sanded with a very fine granulated sugar, no crystal being used. The cubes are

of five colors arranged to form the cross stitch design—a deer in the center, with a simple decorative border.

Colors and Flavors:

Yellow (lemon)—Only fair; slightly off taste.

Green (lime)—Good.

Light Red (raspberry)—Fair.

Orange (orange)—Weak.

Pink (rose?)—A faint suggestion of rose.

Number of pieces: 150.

Remarks: The package is novel and unusual. For a type of candy so wholly dependent upon flavor and appeal to the eye, better flavors and more of them might be used. At least one of the flavors had begun to turn, indicating the need of closer supervision in storage and handling.

The design presents a handicap

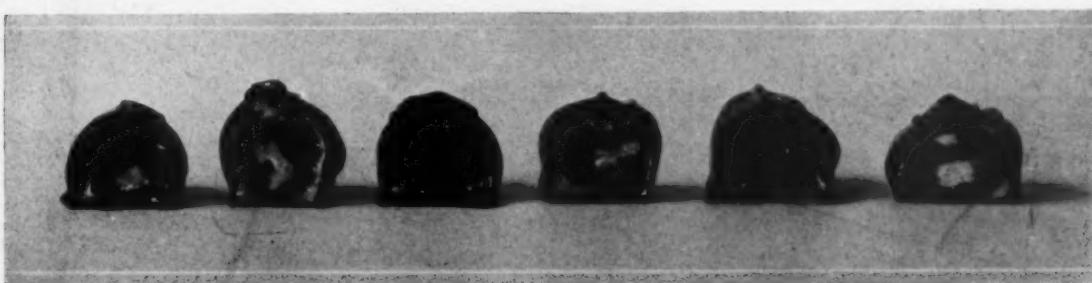
in the way of flavor assortment, inasmuch as so large a proportion of the pattern represents background for the deer and therefore, of necessity, must be of one flavor—in this case, lemon. When as many as two-thirds of the pieces in any package are of the same flavor, the eating appeal is proportionately limited. But then—one must sacrifice something for art's sake and the conception and execution of this package deserve to be classed as art.

Code 12B 29

Chocolate Coated Filled Prunes—1 lb.—\$1.75

(Made in San Jose Valley, California—where prunes are prunes.)

Appearance of Package: Simple and attractive two-layer red-wood box



Revealing the "innards" of the "4-ply" confection (Center, prune, fondant and chocolate coating).

WHAT'S NEW IN CANDY PACKAGES?



A patented Cellophane wrap with twisted and colored ends and resembling the holiday "snapper" which formerly adorned Christmas trees.

with neat lithograph scenic label offset to one side, with name and seal of manufacturer imprinted in brown directly on box. Box wrapped in gold Cellophane.

Appearance of Package on Opening: Creates impression of dignity and simplicity. Embossed liner of gold glassine.

All pieces are chocolate coated, the pieces being of necessity rather large (24 to the pound). Centers consist of small size, mechanically-pitted prunes filled with a variety of centers and dipped in fondant before being chocolate coated.

Chocolate Coating:
Type: Sweet vanilla coating.
Color: Good.
Gloss: Excellent.
Taste: Excellent.
Dipping: Good.

Centers:
Pitted Santa Clara prunes filled as follows:

Almonds: Good.
Orange Peel: Good.
Walnuts: Good.
Lime Paste: Good.
Apricot: Good.
Almond Paste: Good.

Remarks: This package is distinctly novel both in conception and execution. From all aspects, this is an excellent box of candy. The prunes are well prepared and in good condition. No fault can be found with the centers unless it be that they might be larger to prevent being dominated by the prune flavor with resulting similarity of taste from one piece to another. By way of increasing the variety, we suggest pineapple, dates, and ginger (although

it seems to me ginger was used in one of these boxes which came to my attention a short time ago). About the only criticism one might make with this package would be that the pieces are rather large, especially in view of the recent trend toward 90 and 100 count goods. On the other hand, unlike some of their diminutive contemporaries, they invite the second bite.

Code 12C 29

Assorted Cream Mints, 1 lb.—\$1.00

(Made in Atlanta, Ga.; purchased in New York.)

Appearance of Package: Attractive and unusual. The candy layout is reproduced in colors on the box top, also briefly described. The package presents an unusual and refreshing contrast to the general run of packages on the dealer's shelves and for that reason alone, should sell. The cover design comprises a series of silver panels over which are printed decorative fruits and flowers in colors with more than the ordinary amount of lettering in black. These panels are superimposed upon a background of black, the whole arrangement effecting a distinctly and original design.

The Box: Extension top and bottom. **Appearance on Opening:** Very attractive and eye-filling. Well packed, with all pieces in place. Colors and shapes harmonize beautifully. All pieces cupped; cups white with green edge.

The Candies: Crystallized cream mints shaped and tinted to represent fruits and flowers. Owes inspiration to

foreign marzipan work which is the more usual medium for this sort of work. Moulding work very good and individual color effects excellent.

Daisy: White petals with yellow center.

Cream: Good.

Flavor: Peppermint.

Tulip: Yellow, with green stem.

Cream: Good.

Flavor: Peppermint.

Bunch of Grapes: Violet, with green stem.

Cream: Good.

Flavor: Peppermint.

Apricot: Yellow and orange color.

Cream: Good.

Flavor: Peppermint.

Pineapple: Light yellow with green top.

Cream: Good.

Flavor: Peppermint.

Lily: White petals, yellow center, green stem.

Cream: Good.

Flavor: Peppermint.

Pear: Yellow and green tints, stem green.

Cream: Good.

Flavor: Peppermint.

Peach: Deep orange color.

Cream: Good.

Flavor: Peppermint.

Plum: Deep red color.

Cream: Good.

Flavor: Peppermint.

Crystal Work: Very good.

Number of Pieces: 38 to the pound.

Remarks: This package of one of our Southern friends deserves honorable mention as a sincere and successful attempt to get away from the prosaic in candy and candy packaging.

(Continued on Page 71)



A delicious bran confection in a homely carton of the household cereal type. The question is, will the novelty of candy packed in this manner outweigh the loss of valuable display features.



Showing what can be done to please the eye and tempt the appetite when an intelligent candy man gets busy on uncoated goods.

Originality a Rare Bird in Retail Candy Mart

By ERIC LEHMAN

WHEN the boss asked me to go out and dig up some new ideas in the way of candy packages for the Review issue, he handed me a tough assignment. I have never been a golf enthusiast but then, factory superintendents are usually able to get in enough walking during the day without golf. But try to find something really different in the way of candy gave me a respect for golfers which I never had for factory superintendents. Although possibly the fact that I am one of the latter myself may have had something to do with it.

I have walked many, many miles from shop to shop. I did not even

neglect the tea rooms and gift shops for I thought they might have something if the regular candy stores did not. I shopped in New York. I shopped in Boston. I shopped in a number of cities in between. I called for samples from other parts of the country. Candies began pouring in—but you know the stuff. Same old line with a new wrapper or a piece changed around here and there. The boss said he wanted something different and it was evident that this was not it.

I was reminded of chocolate dipped pickles, olives and pickled fruit rinds—these things get away from the beaten path but are certainly not new. It is evident that

what we need in the candy industry is young blood with new ideas and a willingness to explore new materials. That is, if we believe that the public is fickle and must have change, which is pretty much the accepted merchandising viewpoint today.

The packages finally selected for treatment in this month's Clinic are not held up as best either in workmanship, materials or novelty of idea. We do think they are good. And we think also that the manufacturers of these packages showed unusual originality of thought in their conception and execution.

We will be glad to have your comments.

Candy . . . in the Press



By C. S. CLARK
Director, Educational and Advertising Dept.
National Confectioners' Association

As reported to A. ADAMS LUND, Editor

RINETEEN TWENTY-NINE goes down as a memorable year in the history of the candy industry. Most remarkable is the changed attitude of doctors and food experts toward candy as an article of food—as a direct outcome of which we are today facing a vastly friendlier attitude on the part of the press.

This medical and dietetic recognition of candy which began to manifest itself about a year ago, and which has been steadily gathering momentum under the impetus of favorable press comment, was no chance happening.

Doctors and food authorities had to be reminded of facts which many of them had long known—namely, the superior healthfulness and the physical need of quick-burning fuels, such as candy, from youth to old age. These facts had to be furnished to them with dependable accuracy by some centralized, fact-

gathering force. And these activities in turn had to be directed and publicized by an organized body representing not any one element in the industry but the candy industry as a whole.

Such was the machinery set up and operating smoothly during the third year of the national cooperative educational and advertising campaign. Today we are beginning to see the fruits of its industry all about us. As if in answer to a widely prevalent suspicion that to indulge one's craving for sweets might be a sign of moral weakness, doctors now openly and in almost every case, of their own initiative, come forward in magazines and newspapers to undo the injustice which has been done and establish a rational view on the part of the public toward candy eating; out of a medley of challenges and contradictions has come a more exact knowledge of candy, the food; writers and editors convinced of the

CANDY in the Reducing Diet

Dr. Woods Hutchinson: 'Strong-Arm Diets Can't Help You Reduce Permanently, But Can Make You Really Ill'

MORE CANDY TO MAKE U. S. SWEETER

\$1,000,000,000 Worth!

EVERY person in the United States—man, woman and child—eats a full pound of candy every month.

THE SPRINGFIELD SUNDAY UNION AND REPUBLICAN, SPRINGFIELD,

By C. S. CLARK

Director, Educational and Advertising Dept.

National Confectioners' Association

reasonableness of the movement are lending a hand and more and more looking to the N. C. A. educational headquarters for information and facts pertaining to candy—and all this for an expenditure of exactly \$295,902.58 during 1929! Match this accomplishment with the advertising campaign of any individual or group of individuals you know of.

Hard Work a Feature in Budget

The difference between that \$295,902.58 and what such a campaign would normally cost was in the earnestness and hard work of the men within the industry who freely gave both time and effort to make the campaign a success.

"The Candy Industry Is on the Threshold of a Great Revival." It was W. C. Dickmeyer who hurled the battle cry at a sorely-tried and disillusioned industry. A courageous band of men put aside their immediate personal interests to wage the battle that is making food history.

Surprising and unnecessary as it might seem, the harder part of the job turned out to be *selling the candy industry on the merits of its own cause*. The medical and food authorities of the nation were readily appealed to by the logic of the facts which we were in a position to present to them; the press were in turn convinced of our honesty and purpose and cooperated with us in every way, but the manufacturer in Kohosh County whom we asked to dig down in his jeans and help out along with the rest of the fellows—well, the less said about him, the better. I suppose one must have slackers and conscientious objectors in every war.

Insuring Your Future Profits

Right now the Finance Committee is seeking new pledges for the critical three-year period which will determine the success or failure of candy's conquest of the menu. There is still time for everybody to get on the bandwagon. The Finance Committee will ask for a one-thousandth part of your annual gross revenue as an *insurance premium* against future aggression—as a fund to educate the public to new food facts about candy, and to pave the way for "bigger profits through better merchandising."

Nowhere is the work of the educational and advertising campaign in greater evidence than in the growth of harmony between individuals

A Tenth for a Tithe?

The officers and those who have directed the educational activities of the N. C. A. have borne the brunt of much unfavorable criticism during the past three years. Anyone who asks for money with which to help us help ourselves is a "bum", a "dumb-bell" and a lot of other things still unrecognized by Webster. At the moment of going to press, the editor is reminded of the early Christian custom of giving a tithe to the Church in the form of one-tenth of one's income. 10% for a tithe to help the Church help others less fortunate than they.

Now when an industry asks its members for one one-hundredth of this amount (1/10 of 1%) to help themselves—it looks like a tremendous sum of money. Many associations no more fortunate than our own ask and receive two and a half times this levy on their gross revenues (1/4 of 1%). If we were to add our criticism to that of the multitude, it would be that the N. C. A. is much too modest in its request.

within the industry. The cementing of trade friendships is especially valuable in cities and towns where it has made possible the organizing of sales conferences and merchandising clinics to adjust local problems and to capitalize on the national appropriations expended in their behalf.

A gradual awakening of interest in Sweetest Day has further served to strengthen these relationships. Regional meetings sponsored to promote Candy Week and Sweetest Day have been more than ordinarily successful, manufacturers realizing their community of interest and gaining an insight into the problems of their jobbers and retailers which they have never before had. As we become better acquainted with one another we find the obstacles on yesterday's horizon melting beneath the sun of a new day.

In its program to carry better merchandising all the way down the line to dealers and retailers, the candy industry has pioneered an entirely new idea in cooperative educational and advertising campaigns. Using the local merchandising clinics and sales conferences as a background, field representatives of the Association have been enabled to accomplish a vast amount of genuinely productive work teaching retailers how to display, advertise and merchandise their candy to best advantage.

Retail sales people have been shown individually and collectively the right and wrong way to sell candy. They have been inspired to sell more candy, to try to attract

customers into their stores with more attractive window and counter displays and to increase the sale to individual customers through courtesy and improved selling technique.

Retailer Expenditures Match Our Totals

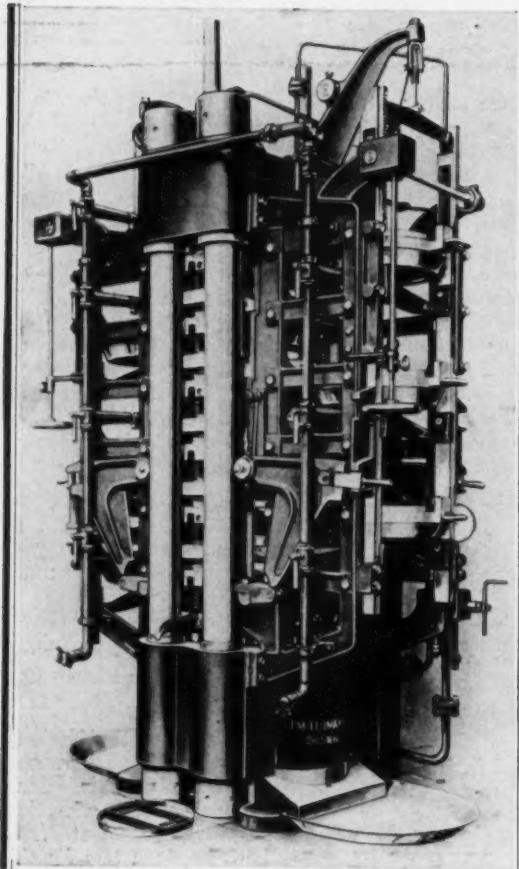
On the strength of the National Campaign, nearly 800 retailers now advertise consistently in their local newspapers, using the advertisements prepared for them at N. C. A. advertising headquarters for this work. Copy, mats and plates are furnished free of charge to any retailer or dealer agreeing to use the service regularly. Already the money which is being spent locally in "control copy" advertising amounts to almost as much as the entire sum being spent annually for national cooperative advertising.

It requires time to build up a background for the cooperative educational and advertising efforts of any industry. During the past two and a half years much of the groundwork for a successful campaign has been laid.

Over 1,000,000 copies of Dr. Herman Bundesen's book, "The New Knowledge of Candy," have been distributed to date. The second million copies is in process of distribution. This work will be continued until every physician, teacher, and member of the parent-teachers' association has been provided with a copy.

During the past year newspapers, magazines and other publications published double the lineage favor-

(Continued on Page 70)



N the early development of the art of manufacture, the number of tools available were few, and when new products were developed, those few familiar tools were, with some adjustments, again brought into play. If we look back a generation or two, we will find that these tools were surprisingly few, and if we begin to trace the rise of our present day complicated industries, we will be more surprised to find that they have all grown along basically the same lines and that the apparent dissimilarity is, to a great extent, superficial.

Lines may be drawn between various industries which manufacture without extensive chemical change, such as weaving, tanning, wood-working, etc., but these lines disappear when the products of these industries are fabricated and we find much the same basic methods used in all.

This fact is being realized more and more each day; consequently,

when a new product or method of manufacture is developed, its use is not confined to that one industry for which it was first made, but an immediate and extensive search is made to ascertain how many other industries it can serve.

Industrial Methods Applicable to Candy

The candy and chocolate industries have, of course, developed along the same lines as other industries. They cook, roast, grind, mould, wrap or pack in exactly the same way as hundreds of other industries. It is evident, however, that they have not always taken advantage of the methods and processes worked out by these more or less related industries, which might be applied with profit to their own. To some extent, the necessity of competing with these industries for a given share of the consumer's dollar has forced us to seek out and employ in limited degree these general manufacturing developments which have contributed to the suc-

Going Modern

The solution of many of the Candy Industry's problems lies in finding out what other industries are doing with the same tools

By EUGENE B. EDWARDS

The power press made it necessary to create vast new markets for low fat cocoas.

cess and prosperity of other fields, but not until the necessity for systematic research along these lines is thoroughly recognized will the chocolate and confectionery industries be able to claim that they are in the van of the present advance in manufacturing methods.

The possibilities inherent in this search for methods in use in other industries which might be applied with profit to our own are practically unlimited, for even where a method or a process or a piece of equipment is not of interest to the trade as a whole, it may still be quite applicable to the particular specialty of some individual manufacturer.

A Little "Give" and Much "Take"

We already owe many of our processes to other industries, and have, no doubt, passed some ideas along. The vacuum kettle came to us from the sugar industry, although it has been in use for years in numerous processes where quick evaporation at low temperature is required. Rotary continuous driers have been used in other industries for many years. Dehumidification was developed years before the candy trade decided to adopt it and work twelve months in the year. Paint and ink manufacturers prob-

THE MANUFACTURING CONFECTIONER

ably did more to make chocolate fine (i. e., fine textured) than the chocolate industry itself. The oil mills made it possible to obtain cocoa butter economically and in such percentages as to keep the price reasonably in line with competing products. The makers of dust collectors for flour mills, cement mills, etc., are showing us how to apply the principle of air flotation to obtain cocoa powders that are really finely ground.

Bring the Laboratory into the Picture

One phase of the advance in manufacturing method that is being constantly overlooked by the average chocolate and candy manufacturer is the scientific control of present methods and the development of new ones by scientific means. Those in the industry who have recognized the value of laboratory control have only applied it to a very limited extent, and often with an equally limited idea of what it is all about. Much good work has been accomplished along these lines by the manufacturers of raw materials such as corn syrup, gelatine, invert sugar, and the like, in order to extend the usefulness of their respective products, and although such work is usually narrow in scope because of the purpose to which it is intended to be put, it is nevertheless an index of what other industries with similar problems are willing to do in order to enlarge the horizon of their products. It is to be hoped that the projected research activities of the National Confectioners' Association will embrace, in addition to the study of selling problems, the sort of applied scientific research so singularly lacking in one of the country's largest industries.



Probably the paint and ink manufacturers did more to make chocolate fine-textured than the chocolate industry itself. Machines like these have been in use in the paint, ink and soap industries for many years.

Contact Your Supplier's Research Forces

If we realize that fundamentally all manufacturing problems are changes in the arrangement of the chemical constituents of the product, and that in cooking, mixing, ageing, etc., we are merely changing the structure or arrangement of these constituents, we begin to appreciate what a great deal of help and guidance can be logically forthcoming from such organizations as the sugar and corn syrup manufacturers, whose interest in our problem is almost as vital as our own. Not only are the problems of these firms quite similar to ours, but in the light of their private researches, there become available to us both the methods and the machines with which to overcome them. It is also quite usual to find that these people have

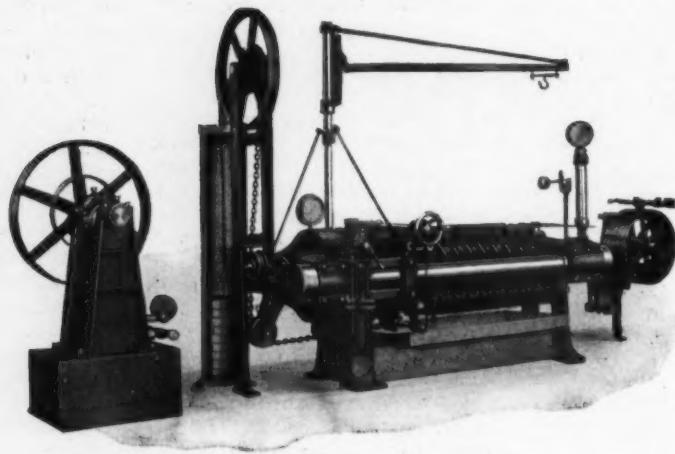
developed an extensive literature in which to record their findings. Since the users are legion to which these and similar basic products are put, it will be seen that the help obtainable from manufacturer literature may be made extremely valuable if it is studied and applied in the proper manner.

Industry Suffers from Inbreeding

It is a well established fact that inbreeding eventually leads to deterioration. The troubles of the chocolate and candy industry are, to a large extent, the result of inbreeding. They have endeavored to be "sufficient unto themselves." Certain methods, formulas and raw materials, because of long usage and tradition, bound the horizon of the trade. A glance at any candy counter or store window will show the narrow limits within which the



GOING MODERN



Courtesy National Equipment Company

The current widely used cocoa butter filter press is a development of the plate and frame press found wherever filter presses are used.

candy industry works. To say that these limits are permanent is as foolish as it is un-American. *The solution consists in finding out what other industries are doing with the same tools.* With this changed perspective, you will find many things possible and practicable which did not seem possible before. Such an appraisal of present methods is indispensable as a preliminary to any planning or research looking to the future progress of the industry.

Notwithstanding the tendency of the candy trade toward extreme conservatism, several new raw materials and processes recently introduced have been gaining considerable headway. One of the most successful of these is malt. Its success in the chocolate trade as a prepared drink demonstrates the results possible in the introduction of new flavors and characteristics.

Basic Changes Gradually Taking Hold

Another development of even more recent date, and one which offers great possibilities to the candymaker, is refined dextrose, the particular characteristics of which are being dealt with in this magazine in a series of enlightening articles by Mr. John Krno.

The chocolate manufacturer has seen the introduction of the expeller method of extracting cocoa butter.

This process was a direct adaptation of a machine which had been in use for years in the oil pressing industries. Correctly applied, it made the production of cocoa butter easier and more economical, besides giving a better product.

There are other examples of similarly recent date, though too few to denote a lively scientific interest on the part of the industry. In fact, in most instances, there has been a regrettably strong prejudice against innovation. This prejudice has had to be overcome before the new ideas would even be entertained, and, sad to relate, there are still many who refuse even to discuss them.

Trade Needs Clearing House for Ideas

The procedure suggested by this article is not new, although it may be new to the confectionery industry; what it calls for is not much different from the present arrangements between auto manufacturers and many others for the exchange of ideas among themselves. It is new to the candy and chocolate industries in that it requires that they drop their "stay at home" attitude and come out and play with the

other fellows.

Technical magazines, trade catalogues, and even the ubiquitous, though sometimes inaccurate, Sunday magazine section yield ideas. We should read anything and everything which has to do with methods of manufacture. Much of this reading will be of no value as far as ideas for our immediate business are concerned, although it will be surprisingly enlightening to see the tremendous number of machines and processes which are being used in the industry and how few are being used in the manufacture of candy and chocolate. We need only find one idea a week or a month and to put it into practice with reasonable promptness and ingenuity in order to become the most progressive and most prosperous industry in the world. Why not give it a trial?

Future Articles by Mr. Edwards Include:

The Working Sample—as a practical guide to the selection of coatings.

Can the Colloid Mill Be Adapted to Chocolate Milling?



Ask Me!

Every month the Ask Me Editor asks ten questions which every intelligent candy man should know. How do YOU rate on these questions?

1. What is "fondant chocolate"?
2. What range of temperatures has the government carbohydrate laboratory established as safe for the storage of chocolate and chocolate-coated goods?
3. What special precaution must be observed with respect to withdrawing stored chocolate goods from storage?
4. What is the normal moisture content of fondant?
5. What gives candy the appearance known as "smallpox" or "measles"?
6. Why is it recommended that surplus fruits be more generously used in the manufacture of candy?
7. How much moisture should properly-cured moulding starch be called upon to absorb?
8. Name eight colloids which are now widely used in the manufacture of candy.
9. What product of the South Sea Islands has recently been introduced in the States as a substitute for cocoa butter?
10. Who originated the slogan "The Candy Industry is on the Threshold of a Great Revival"?

Answers to November Questions



1. Which of the vitamins have been isolated or secured in concentrated form for commercial use in food product manufacture?

Ans. Vitamin A may be obtained in patented preparations such as "Oscodal"; Vitamin D, resulting from commercial irradiation of ergosterol, may be secured under the trade name "Vio-sterol," the name assigned to the product of Professor Steenbock's patent by the American Medical Society.

2. Brown & Co. have a chocolate dipping room 25 feet by 40 feet by 12 feet high. How many tons of re-

frigeration will they require to cool air having an original temperature of 80° F and 80% humidity to a 65° temperature and 40% humidity?

Ans. About 5 to 6 tons per day. A useful chart for determining quickly the answers to practical refrigerating problems such as this, is scheduled to appear in an early issue of "The Manufacturing Confectioner" under the title, "How Much Refrigeration Is Required to Cool Air," by W. F. Schaphorst, M. E.

3. Which of the nut meats extensively used in the candy industry is of strictly American origin?

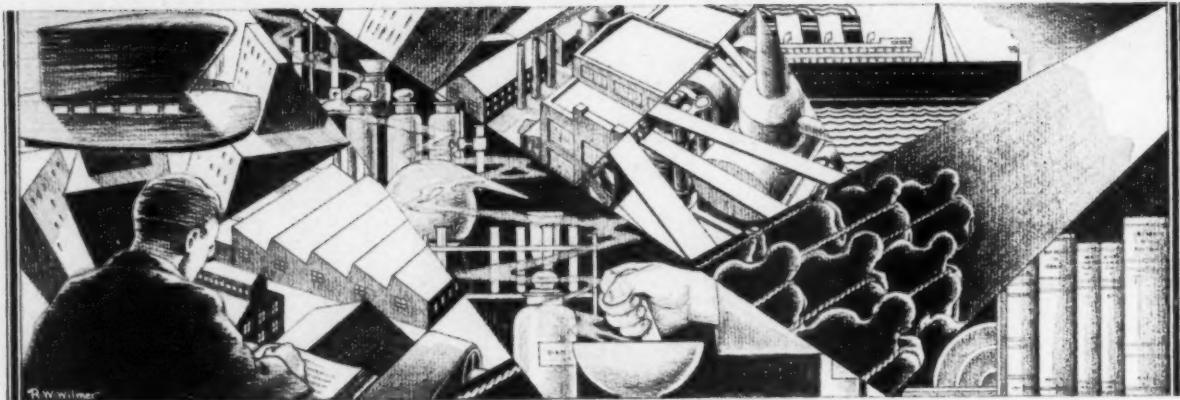
Ans. The pecan.
Which flavoring ingredient?

Ans. Maple sugar, and genuine maple flavor.

4. Apart from its valuable emulsifying and chocolate bloom retarding properties, what physiological or dietetic value would be derived from the introduction of lecithin in "health" candies?

Ans. Lecithin contains vitamins A and D. It is especially rich in phosphorus, the rarer of the two mineral elements, calcium and phosphorus, required for bone-building. This phosphorus is in readily utilisable form. Considerable significance is attached to the fact that nature invariably provides a large amount of lecithin for all young and growing organisms; thus the yolk of the

(Continued on Page 71)



Monthly Digest of CURRENT TECHNICAL LITERATURE

Cocoa Butter



By W. Springer.
Chemische Umschau auf dem Gebiete der Fette, Öle, Wachse und Harze, vol. 36, p. 165 (1929); *Food Industries*, vol. 1, p. 565 (1929).

A METHOD is described for determining, in one test, the turbidity time and the congealing time for fats and hydrogenated (hardened) oils, with particular reference to cocoa butter. Fats differ widely in these two properties, and different kinds of cocoa butter show characteristic differences, so that the method can be used in testing cocoa butter for its origin (pressed or extracted, from shells or waste) and the amount and kind of adulteration.

The method is considered to be adaptable to many kinds of fats and oils, but in its present form it is most useful for cocoa butter. Turbidity time is the time elapsed from the moment the oil or melted fat reaches 122° F. until a mark on the apparatus ceases to be visible through a given thickness of the oil. It is expressed in seconds. Congealing time is the time from the moment this turbidity is reached until the determination of the congealing point is completed, and is expressed in minutes.

Jellifying Power of Pectin Depends on Reaction with Acids

Anon. *Food Industries*, vol. 1, p. 540 (1929).

AT the annual meeting of the Society of German Chemists held in Breslau recently the topic of pectins was discussed by Prof. Ehrlich. Pectins are rapidly increasing in commercial importance because of their property of forming gels, and many factories are now making pectin for the food industries from waste fruit products.

The jellifying power of pectin varies with the material from which it is extracted and the method of extraction. The hot acids of the fruit acting on the pectin during extraction modify its jellifying power. The jellifying power of one commercial pectin preparation which was tested was so great that 3 ozs. jellified 250 ozs. of water almost instantly.

Grape Products Industry to Stabilize Itself

Anon. *Food Industries*, vol. 1, p. 539 (1929).

TO extricate the industry from its present predicament the Federal Fruit Stabilization Corporation

has been organized to operate under the recently enacted farm relief act. A grape products conference was held recently at the University of California, and among the products discussed were grape concentrate, powdered grape juice and grape candies.

Nut Facts You Should Know



By J. W. Ackroyd. *National Nut News*, vol. 3, p. 21 (1929).

THE demand for nuts is constantly growing. The bulk of our imports consists of almonds, walnuts and cocoanuts. The most popular varieties of almonds are from Formigetta, France. Shelled almonds, largely used by confectioners, for the most part come from Spain, Sicily and Italy. The walnuts from Grenoble, France, are said to be the best, and those from Naples have a fine flavor. Importations of cocoanuts are chiefly from South America and the West Indies.

Recent experiments show that the food value of nuts is much greater than was formerly supposed. Investigations conducted by the Agri-

cultural Experiment Station of the University of California emphasize the fact that nuts are to be regarded as true foods rather than food accessories. The edible portion of almonds, for instance, contains water, 4.8%; protein, 21%; fat, 54.9%; carbohydrates, 7%; ash (mineral salts), 3.9%; fuel value per pound, 3,030 calories.

The English walnut ranks next to almonds in popularity. In Korea it is a regular article of diet. The edible portion of the walnut contains water, 2.5%; protein, 27.6%; fat, 56.3%; carbohydrates, 11.7%; ash, 1.9%; fuel value per pound, 3,100 calories.

The relatively high fat and protein contents of nuts make a very desirable supplement to candy, which, without such additions, would have an unbalanced proportion of carbohydrates from a nutrition standpoint. Nut candies are balanced foods and give the candy manufacturer an opportunity for valuable publicity in proclaiming the virtues of candy as a food to be eaten regularly.

Banana Pectin

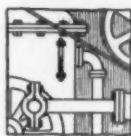


By Harry von Loesecke. *The Fruit Products Journal and American Vinegar Industry*, vol. 8, p. 14 (1929).

THE use of pectin in the preparation of jellies and marmalades has increased greatly in importance during the last ten years. Pectin is also being used in the candy industry. Until comparatively recently the principal source of commercial pectin has been apple pomace, but now citrus pectin has come into use.

The results are given of preliminary work on banana pectin by the chemical research laboratory of the United Fruit Co. These results indicate that pectin can be extracted from the peel of bananas, the pectin obtained thus far being lower in jelling power than commercial apple pectin. Both the dried banana pectin and pectin concentrate have poor keeping qualities at the present stage of the work. Further research is being conducted on the preparation and properties of banana pectin, including both the pectin in the peel and that in the entire fruit.

Safety in Candy, Chocolate and Cocoa Manufacture



Industrial Safety Series No. F-2, published by the National Safety Council, Chicago, Ill.

THIS pamphlet gives the results of a survey of accidents in the confectionery and chocolate and cocoa industries, including the causes, kind of disability and time lost by employees and amount of compensation. Precautions for preventing accidents to employees and damage to buildings and equipment are outlined. Summaries of some of these precautions are as follows:

In pulverizing sugar it is essential that no sugar dust escape into the room for it is explosive when mixed with air. It is important also that every possible precaution be taken to prevent ignition; this calls, among other things, for proper venting of the apparatus and ventilation of the pulverizing department.

In view of the explosive character of starch dust mixed with air in certain proportions, mogul machines should be so enclosed that no dust escapes into the room, and the belts, pulleys and various parts of the machines should be electrically grounded to avoid any possibility of a spark due to static electricity generated in the operation of the machines. The process of cleaning and bolting starch is accompanied by an amount of starch dust which may form an explosive mixture with the air, and should be conducted, therefore, in a fire-resisting enclosure without open lights. The room should be thoroughly ventilated and the dust removed daily. Various other more obvious precautions for safety of equipment, building and employees are outlined.

The National Fire Protection Association has stated that a desirable candy or chocolate and cocoa factory should conform to the following requirements: "Buildings to be of reinforced concrete construction with tile partitions. Stairs and elevator wells cut off in a standard manner, and all floor holes, chutes, etc., automatically trapped. Wired glass in metal frame windows. Floors waterproofed and scuppered. Where necessary, as in packing, and chocolate coating rooms, hardwood flooring over the concrete floors.

Dry rooms, roasting rooms, hard candy bench rooms, sugar pulverizing, cocoa grinding and starch bolting rooms cut off. Power plant detached or cut off. Cooking, hard candy bench work, roasting, and melting all done by steam, refrigerating by brine circulation with ammonia plant cut off or detached. Electric light throughout, with vapor-proof globes and outside switches for sugar, starch-bolting or cocoa pulverizing rooms. Basement well drained, all stock kept well skidded. Where the use of gas is necessary, all gas jets should be controlled by one master valve. Where electric heating is done, pilot lights to be in circuit. Standard watchman's service with stations in dry rooms. Complete sprinkler equipment with alarm valve. Standard inside protection of pails or chemical extinguishers distributed in every room. Detached storehouse for any special inflammable oils or other materials. All rubbish and sweepings deposited only in metal barrels with covers. Cut off rooms for storage of excelsior."

Fumigation Has a Definite Place in Factory Sanitation



By Harry Stiner, *National Biscuit Co. In Food Industries*, vol. 1 (1929), p. 583.

AT first thought it would seem that fumigating with some invisible, pungent and often deadly gas would not be just the proper thing to prevent insanitation around a food manufacturing plant, nor is it in some ways. However, the ever-present hordes of putrefactive and pathogenic bacteria, as well as many forms of unsightly and odoriferous molds and yeasts which find favorable conditions here and there throughout the plant, frequently can be controlled by fumigation much more expeditiously and cheaply than in any other manner.

Fumigation will seldom completely sterilize filthy, water-soaked floors, or neglected pools of water, but it will destroy millions of militant organisms constantly produced by such places for general distribution. It will check their development around machinery and in cracks and crevices in the walls where small particles of moist or

DIGEST TECHNICAL LITERATURE

ganic matter collect. It also will control insect infestation, thus eliminating one of the most positive as well as undesirable vehicles of distribution.

Air is a common carrier of bacteria, yeasts and molds from one place to another; especially is this the case with moist air of factories. The different portable utensils used in the preparation of foods collect them from the air, also from being wiped from dirty rags and brushes, or by coming in contact with the floor only to release them when touching the food materials. Insects, when not controlled, are among the worst pests in factories. Besides destroying much of the material they infest, it is usually rendered obnoxious by the filth they create, and, in addition, their bodies are covered with various micro-organisms. Rats and mice can be killed as easily, and with the same gases, as insects, provided all holes in the walls and floors are closed before fumigating to prevent their escape.

The treating of even a large room with fumigating gas is a comparatively simple matter when sufficient interest is taken in the fumigant beforehand to learn its peculiarities. However, no single material has yet been developed that can be termed a panacea, because of the large variety of materials to be handled and their reactions to the various gases. The danger from fire and to animal life (including man, in some instances) must also be considered, as well as the sensitiveness of some colors and metals. Many gases have been advocated for micro-organism sterilization, as well as for insect and rodent control, but cost or inefficiency have prevented most of them from being universally adopted.

Sulphur dioxide, or the fumes of burning sulphur, is one of the oldest fumigants in present use. It has the advantage over some gases of being both an insecticide and germicide, although not the most potent in either rôle. It is non-explosive, but has strong bleaching power on many foodstuffs and organic colors, and also tarnishes most polished metal surfaces. It requires the presence of moisture to develop its full efficiency. The recommended dosage is 4 lbs. of sulphur plus the vapor from 1 lb. of water per 1,000 cu. ft. of gross space, and an exposure of 8 to 24 hrs. Liquid

sulphur dioxide can be purchased in convenient metal containers. About 12 ozs. of the liquid per 1,000 cu. ft. is recommended, plus some moisture if the air is dry, and the exposure should be similar to burned sulphur.

Formaldehyde, in its commercial form, formalin (a 40% solution in water), generally is considered the most efficient germicide gas in common use. It is not a bleaching agent nor does it attack most metals. The gas is pungent and irritating to the nose and eyes, but is not considered poisonous to man, and by the same token it has but little effect on insects and rodents.

Heat, aside from its value as a direct sterilizer in liquids, is employed extensively as hot air when and where the materials to be treated and their surroundings are such as will permit the temperatures necessary, 130° F. destroying insects in a half hour if applied directly. However, this seldom obtains in large buildings, due to air working through the walls and floors and cooling certain parts. Hot air seldom is used as a germicide in buildings because of the high temperature necessary to destroy the spores.

Cyanogen, in its various commercial forms such as potassium, sodium or calcium cyanide, also liquid hydrocyanic acid gas, is the most deadly fumigant for use with all forms of higher animal life, except mites. It possesses fair penetrating power. However, as a germicide it is considered of no value. Utmost precaution must always be taken when using cyanide, and only experienced operators should be permitted to handle it.

Carbon bisulphide is the most popular fumigating medium for insects. It also is poisonous to smaller mammals, but is not used as a germicide. It is very explosive at fumigation strengths and must always be protected from fires and hot surfaces. The liquid is a strong fat solvent, and the gas affects the flavor of oily nuts such as pecans, cashews and walnuts.

Ethylene oxide is a comparatively new fumigating gas, and as an insecticide is advancing rapidly. It has a more poisonous effect on insects than carbon bisulphide, and is not as poisonous to man. It is considered non-explosive at fumigating strengths and is much easier to use, being a gas at normal temperatures.

Tests have demonstrated its excellent penetrating power as well as its passive influence on foodstuffs, metals and colors. Ethylene oxide is sold in cylinders under pressure, which only need opening to apply. Recommended dosage is 2 lbs. per 1,000 cu. ft. of space for 24 hrs.

Powdered Fruit Juices



Anon. Food Manufacture, vol. 3, p. 514.

ARRANGEMENTS have just been completed for the installation of a plant in San Juan, Porto Rico, for the conversion of fruit juices to powdered form by a process said to be similar to that used in making milk powder. Surplus juice resulting from the canning of grapefruit and pineapples will be used as raw material. The powder is intended for use in bakery products and in other commodities where liquid flavoring materials cannot be successfully used. If the project proves a success, extensions are planned.

Food Value of Pecans

By Connie J. Bon-slagel. National Nut News, vol. 3, p. 24 (1929).

SINCE the eyes of the world have been turned on a "healthful diet" increasing attention has been given to fruits and nuts as desirable foods.

Pecans are a highly concentrated food, as all nuts are, being especially rich in fat. They contain on the average 70.5% of fat against the 56.3% of the black walnut, 61.2% of the butter nut and 64.7% of the hickory nut. The protein content of the pecan is lower, 9.6%, as compared with 27.6% in black walnuts, 27.9% in butter nuts and 15.4% in hickory nuts. In carbohydrates the pecan again ranks high, 15.3%, while black walnuts have 11.7%; butter nuts, 3.5%, and hickory nuts, 11.4%.

In fuel value pecans run 3,330 calories to the pound. They contain, in addition to the 70.5% fat,

THE MANUFACTURING CONFECTIONER

15.3% carbohydrates and 9.6% protein already mentioned, 2.7% of water and 1.9% of ash (inorganic salts). Little investigation appears to have been done on the vitamin content of the pecan. However, one investigator reports that pecans contain substantial amounts of vitamins A and B.

Pecans, as well as other nuts, constitute a valuable addition to candy in this day of ever-growing discussion of nutritive values and proper regulation of the diet.

"Slab Milk"

Anon. Food Manufacture, vol. 3, p. 486.

A DANISH inventor has a special process whereby he claims to preserve milk in the form of slabs. A factory for the manufacture of this product is to be erected shortly in Denmark. The inventor states that all the water is extracted from the milk, and that the dry residue, compressed into the form of slabs, will keep for years. By addition of warm water, the dried milk can be used immediately as "fresh milk." Hitherto preserved milk has appeared on the market only in the form of condensed milk or milk powder. The new Danish process would, consequently, be an addition to this branch of the trade.

Tree Crops



Review in National Nut News, vol. 3, p. 12 (1929).

THE culture of nuts of all varieties is spreading rapidly and is receiving attention which promises a widespread industry in a short time. One stimulus to this growth is undoubtedly the fact that nuts are being used more and more as a food.

"Tree Crops," a book written by J. Russell Smith, professor of economic geography at Columbia University, devotes a great deal of space to the growing of nuts. A table of food analyses shows that nuts have a higher food value than meat, grains or fruits. Another table gives the food value of thir-

teen kinds of nuts as compared with milk and the comparative price values in each case. For example, peanuts supply the same amount of protein at 4c that milk supplies at 24c.

One especially interesting paragraph states: "The freedom of nuts from putrefactive germs and from ptomaine poisoning are points which we may esteem more highly as we increase our knowledge of what occurs in our digestive tracts."

Eliminating Insect Pests from Foods by Fumigation; A New Industrial Process



By Laurence V. Burton. *Food Industries, vol. 1, p. 366 (1929).*

ONE solution of the problem of insect pests is fumigation of the food and its protection from secondary infestation. The remedy is simple, and the means of carrying it out are commercially available.

Candies are most commonly infested by the Indian meal moth and the saw-toothed grain beetle. The female of the former lays about 350 eggs on or near food. The larva (worm) is the stage causing injury and, when full grown, is whitish to flesh colored and about $\frac{1}{2}$ inch long. The adult of the saw-toothed grain beetle is a tiny reddish-brown beetle about $\frac{1}{10}$ inch long. Each female can lay more than 200 eggs, in cracks, crevices, or food. The larva is whitish to yellowish in color and about $\frac{1}{10}$ inch long. The common sources of infestation are dried fruits, nut meats, used sacks and storage containers, spices, nut and fruit candies, carton goods, sugar (occasionally).

A good fumigant for foods must possess certain characteristics, the most important of which is its ability to destroy not only the living insect, but likewise the eggs, for if only the adults were to be killed it would not be long until the eggs would hatch out a new brood. Second in importance is the ability of the fumigant to perform an efficient disinfection without injuring the food. These two qualifications automatically rule out many of the

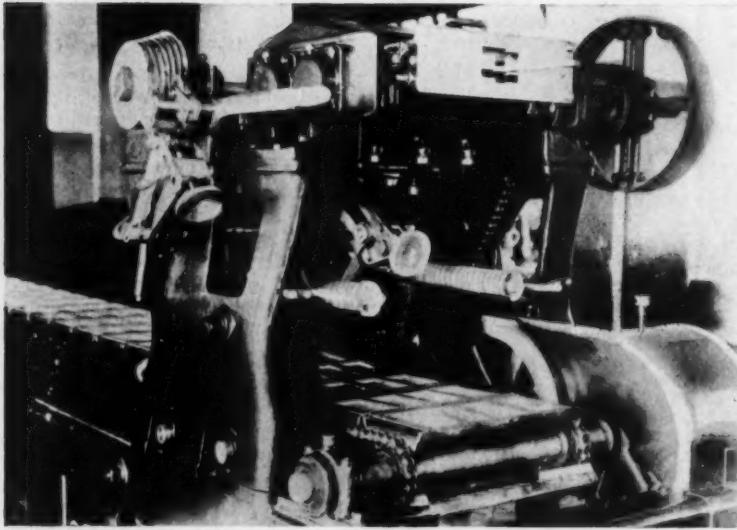
commonly suggested insect exterminators.

A third characteristic of nearly equal importance is that the fumigant must be removable from the food after it has performed its service and that it shall not leave a permanent residue of obnoxious or dangerous substances. A fourth qualification for a good fumigant is penetrability, and, to meet this requirement, only gaseous substances may be employed or substances that are gaseous at temperatures to which the food may be subjected without injury or alteration.

At present two well-known substances are commercially available that meet the requirements of a good fumigant, namely, carbon bisulphide and hydrocyanic acid gas. A third substance, ethylene oxide, is one that appears to hold considerable promise and is now being studied by the U. S. Department of Agriculture. Other substances may occasionally be used for fumigating foods, and research will probably develop still other food fumigants.

Carbon bisulphide is highly inflammable, and hydrocyanic acid is highly poisonous. Carbon bisulphide possesses inflammability to such a degree that its vapors, when mixed with air, will ignite upon contact with a hot steam pipe. Liquid hydrocyanic acid gas in pressure cylinders—in distinction to its other available forms—is also a dangerous substance for the reason that the slightest leak in the valves or piping may be the cause of the death of the operator or others. Possessing such hazardous characteristics, these two fumigants must be handled in special equipment and under controlled conditions. When so handled with proper care and intelligence in any of the three types of properly designed equipment the hazard involved is virtually *nil*.

In discussing food fumigation it should be pointed out that the subject is the fumigation of a commodity and is clearly differentiated from the fumigation of buildings, mills and factories. Apparatus must be gas-tight to be commercially practicable, except where open-tank fumigation is practiced. Of the closed-type equipment, two forms are on the market, each based on the method of applying the toxic gas.



The Jensen Chocolate Moulding Plant is one of the most impressive of the 1929 crop of candy machines. Note oscillating head of the depositor with removable moulds in chain conveyor coming up into position from warming chamber.

Candy Machinery Abroad

As reported to

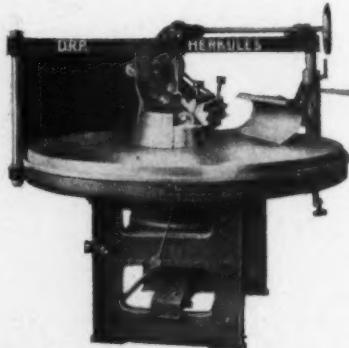
THOMAS GORDON

Foreign Technical Correspondent to
The Manufacturing Confectioner

UP until a very few years ago, the confectionery industry was woefully behind almost every other industry in the production of the specialized machinery needed to replace hand labor. The few candy machines which were available, and by that I mean machines specifically designed for candy rather than the more common adaptations of equipment perfected for use in other industries, were poorly conceived and even more poorly executed.

The chocolate department was somewhat better served, but perhaps only because the art of grinding and mixing was one which had received attention since the beginning of the human race. Still, even in this branch of the industry there has been a noticeable tendency to adapt principles worked out for other fields rather than to perfect the method of grinding best suited to this particular product.

(Names of machine manufacturers and distributors will be mailed to subscribing confectioners upon request. THE MANUFACTURING CONFECTIONER assumes no responsibility by way of recommending these machines over other equipment not specifically mentioned in the author's text.—The Editor.)



A hard candy batch mixer—product of a German machinery manufacturer.

Progress in Process Research

In Europe, we do find some new machines specifically designed for the confectioner and chocolate manufacturer. These will presently receive consideration. By far the greatest work, however, has been accomplished—not in machine design, but in the somewhat newer field of *process* research. For example, years of effort devoted to improving chocolate refiners and cocoa mills have been nullified by the development of a single process which completely antiquates both.

Of course, it is hardly to be expected that the manufacturer will immediately scrap all of his present plant equipment to install the new even though, in the long run, it might prove to be the most economical thing to do. It is comparatively easy to induce a man to buy a machine which gives him a bigger and better yield by the *process he is used to*. It is somewhat more difficult to convince him that the study and effort of a life time have been

THE MANUFACTURING CONFECTIONER

misdirected and that the results of this effort must be scrapped in the name of Progress. On the other hand, manufacturers who are in the market for new or additional equipment will hardly be apt to continue buying the old refiners after they have had an opportunity to investigate the situation and study the methods employed by their more aggressive competitors.

Another long step ahead in the field of process research is the Baker-Clay Cream Center Plant. Again it will be noted that the change is not so much a matter of machine design as it is of process research. It applies an entirely new principle to the conventional and age-old process of cream center manufacture. Taking advantage of the possibility of controlling crystallization while it is going on in the fondant during the course of its manufacture, it eliminates many things heretofore regarded as essential—the “sweating” or ageing of the fondant, remelting it, and the subsequent long storage of the center in starch; it obviates the need of specially treating the cream to produce soft or flowing centers.

From Raw Material to Coater

In this process, sugar and glucose enter the machine at the proper moment; a simple frappé is added, and the finished center base is delivered by a pump to the hopper of the depositing machine. In half an hour the centers are ready to leave the starch. A few days after dipping they will be plastic or will flow according to the method used in cooking. All controls are positive. There is no guesswork at any stage of the process. It is strides like these which will determine the commercial status of candy in relation to other industries.

From the standpoint of purely mechanical advance, the Jensen moulding plant for chocolate is perhaps the most impressive of the machinery developments. This machine will deposit, in any type of mould you select, any consistency of chocolate all the way from a liquor to a paste of 15% fat content. The deposits are, to all intents and purposes, exactly uniform in weight and of perfect finish. One of the most striking features of this plant is the depositor head which swings backward and forward, thus doing away with the usual necessity of stopping and starting the moulds in their passage through. The shaking

Baker-Clay Continuous Center Plant ready to be attached to a continuous beater.



table is another entirely new departure and one which works with genuine efficiency and without floor vibration.

The writer has watched one of these machines mould 85 half-pound cakes a minute, delivering them to the wrapping machines demoulded, on a continuous belt, with the attention of only *three persons* all told. Another machine could have been operated with the addition of *two more girls*.

The new ROMAC machine is an unusually compact one, capable of turning out 1,000 lbs. of fruit drops in eight hours. It differs from its

forerunners in that the drops may be of any shape, and this shape can be changed as often as desired. It is only necessary to change the dies.

Stuffing the Pop

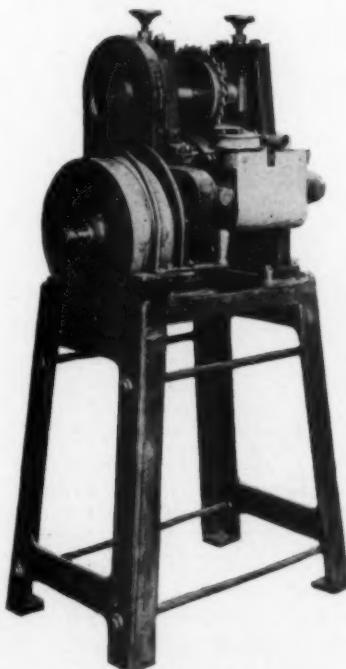
The drops are well formed and are without fins or die marks. The sides are at exactly right angles to the plane of the faces, and any desired device may be impressed or embossed upon the faces.

These same people are about to list a new die-pressed “POP” machine which will produce a pop with a soft center; in other words, a stuffed pop.

Both machines are rugged and well built.

Another English concern of reputation and standing is devoting its energies to the production of the standard machines of the candy industry, but in such a form that they will be a credit to the engineering trade. They present, among others, the “Britton” Drop Rolls. In this machine, the bronze impressions are cut in a sleeve which slips over a steel drum. In this manner, the effect of changing the rollers is accomplished by slipping off the sleeves and replacing them with others having the desired pattern. As the bearings and gears do not need to be touched, the whole operation can be accomplished in two to three minutes. The gears are adjustable to take up wear or slight variations in register.

Another of their machines is a nougat cutter. There is little to be said of this machine except that they have carried through and produced, from the standpoint of mechanical construction, efficiency, size, control



The “Romac” Machine for fruit drops. The hard candy is shaped under pressure in interchangeable bronze dies.

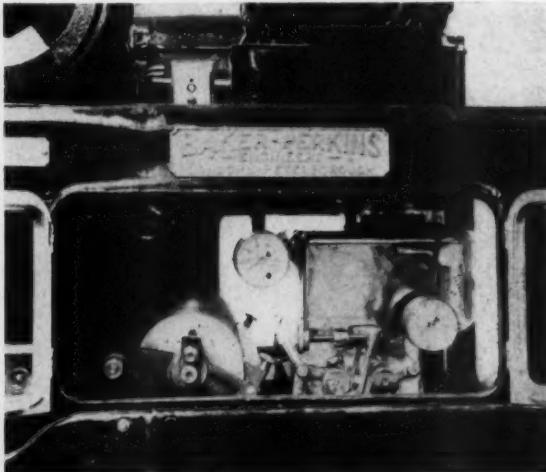
CANDY MACHINERY ABROAD

and accessibility to cleaning, what is absolutely the best nougat cutter the writer has ever seen.

Condensed Wrapping Machines Sacrifice Accessibility

Many new automatic wrapping machines are being offered in this market, but they do not appeal. The effort to condense them into the smallest possible space has sacrificed something of their usefulness. An automatic wrapper for sticky material should have all of its working parts fairly accessible, and also out of the path of falling bits of the material being handled. All movements must be positive and very exact. A machine which will fulfill these essential needs must be rugged and of decent size. The European machines appear to have sacrificed these features in an effort to copy a watch.

Exposing the "innards" of a new International Coating Machine.



"Oakite"—O. K. When It Comes to Entertainment

The annual get-together of the Oakite Sales Department this year was staged as an Engineers' Frolic.

For downright originality and organized frivolity, first prize goes to Chief Radley and his gang.

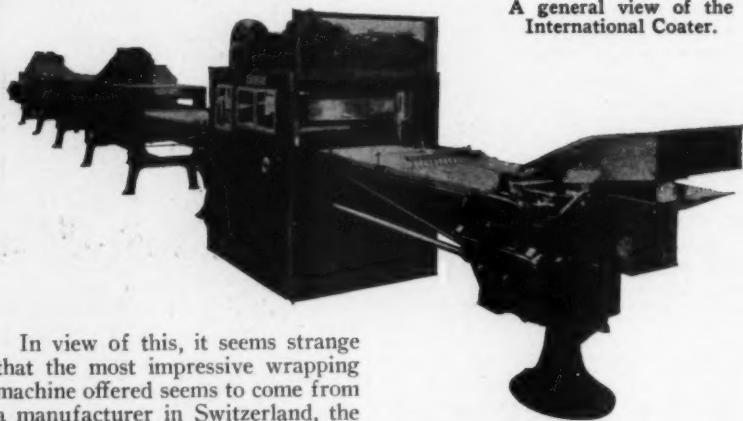
On November 22nd the Roof Garden of the Pennsylvania Hotel in New York was transformed into a rendezvous of railroad men (if one was to judge by the raiment of those assembled and the layout of surroundings).

Here gathered Radley and his gang of Oakite Salesmen and guests—all attired in railroad men's garb.

The whole setting first was that of a Pullman train in the station—trainmen,

In view of this, it seems strange that the most impressive wrapping machine offered seems to come from a manufacturer in Switzerland, the home of clocks and watches. Of these Swiss machines, particular attention should be given to the newest departure in foiling machines. The simplicity of the action

A general view of the International Coater.



and the certainty with which the device is located on the foil are a pleasure to behold.

The new INTERNATIONAL covering machine, built in England, is the last word in mechanical construction. It is built in three sizes, and while probably the only new feature is the very effective device for taking away the "tails" from the pieces, it is nevertheless quite new in its entirety. This machine embodies all the best features of covering machines; is positively controlled in every part, and is built with the care and exactness of a high-class motor car.

Temperatures are controlled by thermostat; belt controls are marked in feet per minute, and the whole drive is through a variable speed gear.

From Germany comes the "Hercules" hard candy batch mixer. From its appearance, it is well named, but the writer is not yet prepared to advise regarding the effectiveness of its operation.

genuine "Red Caps" and everything.

Then the gang gathered round the festive board to partake of a real human array of chow.

Following this came the entertainment—not just a few paid entertainers, but a well rounded program of the unusual in stunts, music, and what have you.

It was a great show—and we all say O. K. Oakite.

The 1930 British Industries Fair

The 1930 British Industries Fair will be held the 17th to 28th of February, 1930. Again it will be held simultaneously in London and Birmingham. The Birmingham section at Castle Bromwich will cover hardware, machinery, architectural and ornamental work, automo-

tive products, etc. Practically every other industry will be represented in the London section.

The London section will be accommodated for the first time in its new home, at Olympia, where exhibitions of various kinds are regularly held throughout the year and where the heating, catering and other arrangements for the convenience of buyers and visitors are excellent. The Fair buildings are compact in arrangement so as to bring the sections in close touch with one another, and three main entrances will facilitate access to the exhibition as a whole.

As in former years, arrangements have been made for the granting of gratis visas on the passports of bona fide foreign buyers visiting the Fair.

The British Industries Fair is organized by the British government and is held annually.

A National Coverage of Wholesalers and Large Retailers



To Help Make Every Dollar of Sales Expense Do Double Duty in 1930—*use this specialized medium for the distributing branch of the candy industry*

For Your Salesmen

Our specific job is to observe candy wholesaling and retailing and report it, constructively.

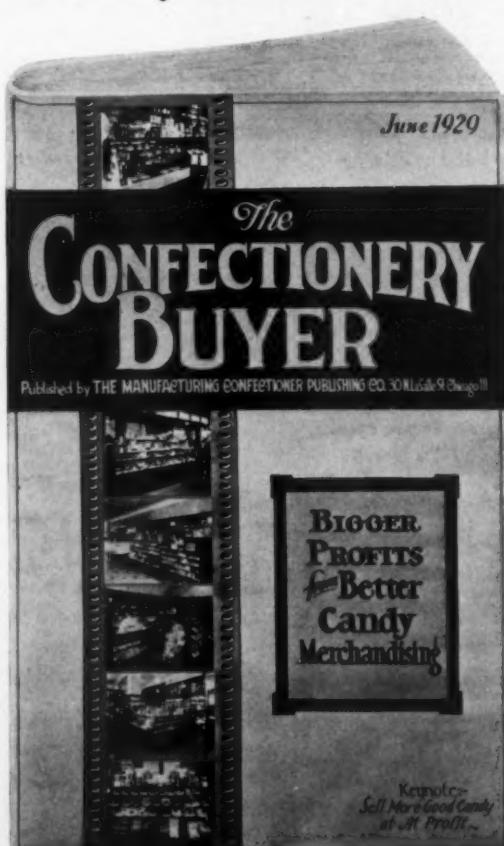
Naturally, candy salesmen will find much information and inspiration in such a clearing house of candy distribution problems.

Memo to Your Steno:

Place standing order

for copies of The Confectionery Buyer for all our salesmen. (\$2.00 for twelve).

Sample copy on
request.



For Your 1930 Sales Program

This 64-80 page piece of direct mail literature (it is not a "trade paper") goes direct (free of charge) to the case-lot buyers of candy—wholesale and retail—the contents is of direct interest to these busy buyers and merchandise managers and it is pioneering an educational campaign for better methods of candy wholesaling and retailing. This is an ideal setting for advertising of confectionery and therefore belongs on the sales program.

E. R. ALLURED, Publisher,
The Confectionery Buyer,
30 North La Salle St., Chicago.

Send us your editorial outlines and advertising rates. Suggest you see us before

..... when we close our schedule
for 1930.

..... "1930 will reward constructive salesmanship"

The Twelve-month in Packaging

(Continued from Page 49)

result of this company's thorough going research.

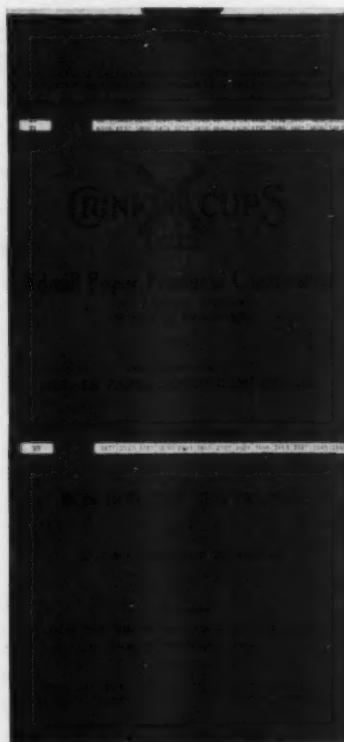
While on the subject of this type of container it might be well to mention a new wire stitcher, recently introduced, which will doubtless interest many of the larger manufacturers. This device, operating on a patented principle, is of simple and rugged construction. It is speedy in operation and practically fool-proof. Compared with the use of gummed tape and gluing, it is claimed to be far less expensive and to make a more effective fastening.

An Automatic Count Chart for Bonbon Cups

Package findings were covered more or less comprehensively in our September issue. Suffice to say that the manufacturers of these package adornments are always on the alert to the demands of the day. Their products reflect this in their beauty of pattern and generous use of color.

One bonbon cup specialist has conceived a count chart which supplies a practical basis for checking deliveries of bonbon cups—heretofore a source of endless annoyance to the buyer. So flexible is this chart that it is possible to obtain the correct count of every conceivable size and kind of cup coming within the purchasing requirements of any buyer in the candy industry. Mathematical computations are arrived at automatically, the results being available at a glance.

Foil manufacturers here and abroad are not only devising new and more attractive patterns, but designing foil wrapping machines which entirely eliminate any neces-



With this handy count chart the buyer can compute almost instantly the correct count per pound of every size and kind of bonbon cup coming within the scope of his requirements.

sity of the candy being touched by hand.

Although reviewed but briefly in these pages, we can report with assurance that in this field a year of very satisfactory progress lies behind us, with next year's horizons illuminated brightly with promise.

Among the more important educational activities of the Association has been the production of an educational film, the distribution of a booklet entitled "Building the Candy Industry," to leading manufacturers and executives throughout the country and the completion of work on sales and display manuals intended to suggest new and better means of selling more good candy at a profit.

Industry Future in Your Hands

Plans for 1930, both with respect to continuance of the Association's

present activities and to broadening these activities along practical lines, will depend upon the amount of money which you people are going to pledge for the new three-year campaign. The Association hopes to continue advertising in present magazines and if possible to add more magazines to the limited number now permitted by the advertising budget.

Also, it is hoped that sufficient funds will be forthcoming to insure the inauguration of the school program which involves the supplying of study manuals to the teachers of eighth grades in 300,000 public schools throughout the country. Such manuals are designed for use during the period of selective courses on Fridays. The program also includes the supplying of an abridged edition of Dr. Bundesen's "The New Knowledge of Candy" for children to take home to their parents, and the showing of the Association's educational film to the classes in the schools. It is estimated that this school program can be put into operation for \$75,000 per year for three years. Far-sighted manufacturers will see in this plan the most definitely constructive educational step that could possibly be taken to insure the future progress and prosperity of the candy industry.

The furnishing of publicity material to newspapers and magazines, as well as to individual food editors and writers, must of course go on—that is our daily bread.

Pledges are being asked of manufacturers, jobbers, retailers, supply firms and others in the candy industry on the exceptionally modest basis of one-tenth of 1 per cent of the contributor's annual gross sales. No method of raising funds for co-operative enterprise can be fairer—no better insurance of good times could come any cheaper to the individual.

The cooperative educational and advertising work of the candy industry has come to stay. Those who participate most whole-heartedly will learn most from the campaign and profit most in their individual businesses.

We must invest in prosperity in order to share in its dividends. It is a game in which the slacker receives his own just punishment.

Have you made your pledge?

THE MANUFACTURING CONFECTIONER

Answers to November Questions

(Continued from Page 61)
 An egg contains 10% of lecithin. All eggs, and all living germs, animal and vegetable, are provided with this quick source of phosphorus, nitrogen and vitamins A and D. (The human brain also contains 10% of lecithin.)

5. *What recent activity of the National Confectioners' Association has been dubbed "the flying circus"?*

Ans. The series of better merchandising rallies held in the principal confectionery centers under the leadership of F. J. Nichols, et al.

6. *What conditions tend to make chocolate take on moisture?*

Ans. 1. The starch of the cocoa bean becomes cooked during the roasting process, breaking down into a series of dextrins (starch-glue) with a pronounced affinity for moisture.

2. If the beans are naturally high in acidity and this condition is not corrected by proper roasting and subsequent storage of the liquor, this acidity will remain to invert a portion of the sugar added in the manufacture of the coating. The invert sugar thus formed is similarly greedy for moisture, and when it gets it, becomes sticky—to the detriment of the coating.

7. *How can the whiteness of dextrose batches (sucrose-free) be readily controlled?*

Ans. Since no sucrose (ordinary sugar) is present, the batch may be cooked on the acid side, with a pH as low as 3.0 or 3.5. Batches which contain any sucrose at all must be kept as near neutral as possible; i.e., between, say, pH 6.0 and pH 7.0.

8. *Which of the more important national women's magazines have taken a distinctly favorable attitude toward candy in the diet and refused to accept cigarette advertising on the ground that cigarette smoking is harmful to women?*

Ans. Good Housekeeping, and Ladies' Home Journal.

9. *What well known children's specialist has gone on record within the past thirty days as favoring candy in the normal diet of children?*

Ans. Dr. Josephine S. Baker, in "Children and Candy" (November Ladies' Home Journal).

10. (a) *What is the chief function of the "sunlight vitamin"?*

Ans. Vitamine D exercises a catalytic action to preserve the nor-

mal calcium-phosphorus balance required for bone structure.

(b) *Why is codliver oil so full of it?*

Ans. Tiny organisms known as "plankton" float as a scum on the surface waters of the Northern seas. The sun "irradiates" the ergosterol which they contain, converting it into vitamine D. Small fish eat the plankton. The cod eat the smaller fish and the surplus of vitamine D which they take on in this manner is stored in the liver.

(c) *How does sunlight create it in our bodies?*

Ans. The fat layer beneath the skin contains a very small amount of ergosterol. A narrow band of the ultra violet portion of the sun's spectrum has the power to "irradiate" this substance, changing it into vitamine D. The vitamine is absorbed into the blood to serve its purpose of controlling the calcium-phosphorus balance and preventing rickets.

Candy Clinic

(Continued from Page 54)
 apple, dates, and ginger (although already its imitators appear to have been busy. For parties, and as a variation from the usual after-dinner mint, this package has bright prospects, although as a general family package for every day consumption, greater variety in flavors is likely to be demanded.

Code 12D 29

Bran Chocolates, 1 lb.—\$1.00

(Made in Battle Creek, Michigan.)
Appearance of Package: The novel feature in connection with this package which led to its inclusion in this month's clinic, is the fact the product is packaged and presented to the consumer much as a cereal, in the familiar breakfast food carton. This is a novel sales approach for candy. The psychology behind it will undoubtedly do more to index the product in the consumer's mind as a food to be counted in on the day's calorie requirements than a lot of idle conversation. After all, if our logic is sound, that candy is a food, it is reasonable to expect that it occasionally be treated as a food by the manufacturer. We would hesitate to endorse this method of packaging for general use since it sacrifices so much that we have learned of the art of stimulating sales through the eye, but as an occasional specialty package—well, the idea is worth watching.

The Box: Of the inexpensive "corn-flakes" variety; background white, blue edges, name printed in red and blue. A note on the box reads: "You are not paying for a fancy box; but for the purest ingredients."

Appearance on Opening: All pieces individually wrapped in waxed paper. (Exit "findings" industry in tears.)

Of course, packing troubles end right here since the boxes can be filled from a hopper if need be, just like grandma's wrapped molasses kisses.

Chocolate Coating: Sweet vanilla chocolate with toasted bran mixed throughout, and resembling a Belmont coating. The coating was of excellent flavor.

Centers:

Vanilla Cream: Exceptionally good. Flavor: Very good.

Remarks: This package of chocolates is certainly unlike anything on the market today. The candy itself is of very fine quality. I would suggest, however, that an assortment of cream centers be used instead of one flavor. Straight-run numbers are never as popular.

Code 12E 29

Chocolate Peanut Square—1 1/4 Ozs., 5c

(Made in Somerville, Mass.; purchased in Boston.)

Appearance of Package: A new and patented type of Cellophane wrapper is employed, having twisted ends with a yellow border.

Chocolate: Sweet vanilla coating.

Color: Good.

Taste: Good.

Gloss: Excellent.

Center: Peanut brittle made up of jumbo splits. Tastes good and eats well.

Remarks: While the bar is nothing new, the style of wrapper is a distinct innovation from the conventional type of bar wrapper. Incidentally this is the only piece I was able to find which was sufficiently novel or different from the ordinary run of goods to warrant special mention in this month's clinic. (Will those manufacturers having what they believe to be something which is an advance in the way of bar goods please tip me off as to where I can find them?)

Vernon Cano Joins Air Conditioning

Mr. Vernon Cano, formerly Vice-president and Chief Engineer of the Bentz Engineering Corporation, has just recently become associated with The Cooling & Air Conditioning Corporation located at 11 West 42nd street, New York City.

Mr. Cano is well known throughout the trade, having specialized for the past eight years on air conditioning problems as applied to candy plants. His many friends will, no doubt, be interested to learn of his new association.



NEW



Here is the new B-P Sugar Sanding Machine — designed and constructed as only Baker Perkins Engineers can conceive and build — for greatest flexibility, reliability, safety, and low maintenance cost. In short it is built to the high mechanical standard expected of B-P Equipment. The demand for a better, a more attractive sanded article is *always* good. With this new



Special Chocolate and

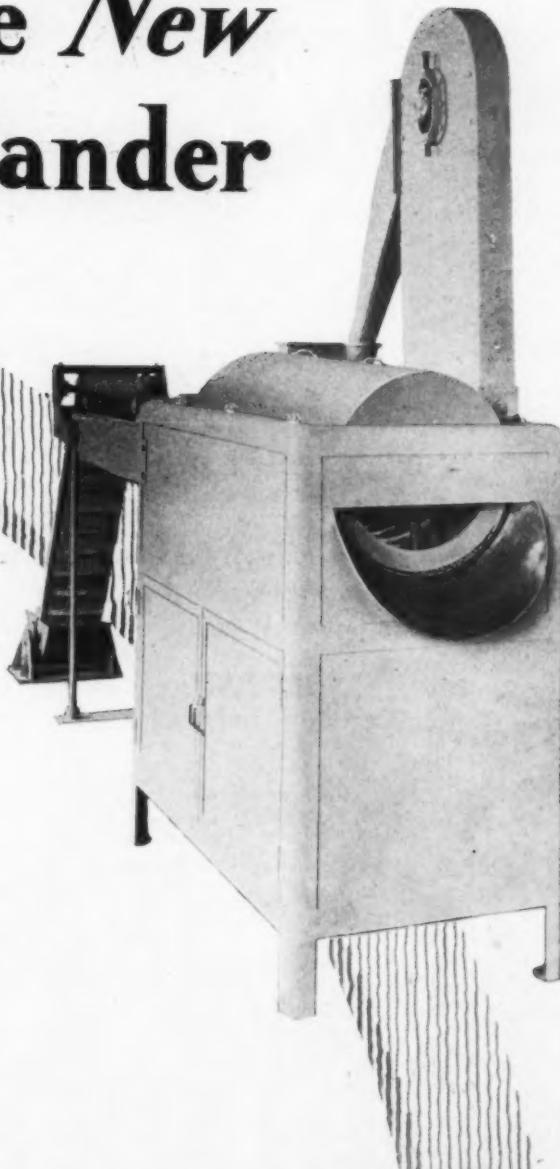
BAKER PERKINS COMPANY, Inc.
250 PARK AVE., NEW YORK CITY, N. Y.

EFFICIENCY with the *New* B-P Sander

Sander you are assured of the highest quality product and you can obtain it without sacrificing maximum production. Think of it! And the out-put for certain kinds of goods runs as high as 1800 pounds an hour. Your own Starch Buck, in most cases, is your only limit.

We will be pleased to tell you why this machine is the one you will eventually buy.

GENERAL OFFICES AND FACTORY
SAGINAW, MICHIGAN



and Confectionery Machines

Made in
One Size
Only
60 Inches
Diameter
for Batches
of from
75 to 300 Lbs.

For
Belt
Drive
May
Also
Be Had
With
Motor Drive



Racine Snow Plow Cream Beater

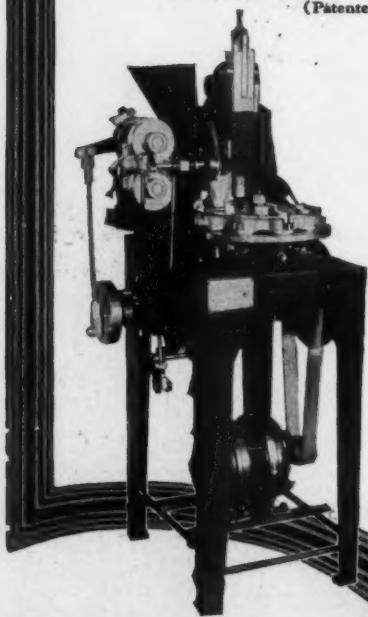
(Patented)

THE Snow Plow is without doubt the most efficient open type cream beater that has ever been produced.

It differs from others in that it works the mass against the side of the pan; the plows being so arranged as to keep the entire batch in constant motion. The plows may be raised and lowered, or adjusted to any desired angle. The door in the side of the pan is a desirable feature, which adds convenience.

Model "M" Racine Sucker Machine

(Patented)



This is the machine that makes the popular ball shaped suckers and flat "pops" with smooth straight sides.

These suckers are very perfect in appearance and very attractive, as they are formed in dies under pressure.

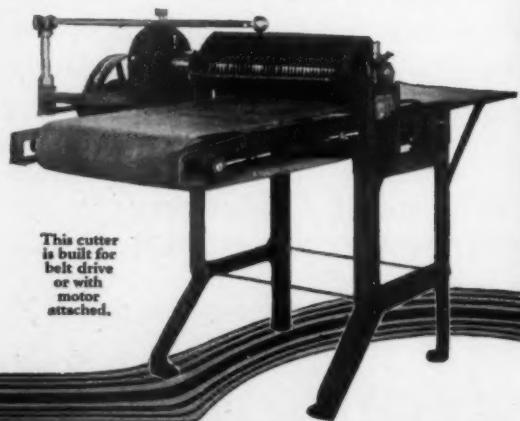
It is not limited to suckers of fixed standard designs, as the dies are made to order to meet the ideas and requirements of the purchaser.

In the design of this machine no provision is made for driving it by belt from a counter-shaft. A motor is supplied with every job, as shown.

Racine Caramel Cutter

A novel feature of this machine is the arrangement for the use of interchangeable arbors.

Without tools of any kind the arbor and cutting knives may be removed and quickly replaced by another arbor with knives of a different spacing. Another feature is the long clutch lever, which the operator can reach conveniently from any position, for starting or stopping the machine.



This cutter is built for belt drive or with motor attached.

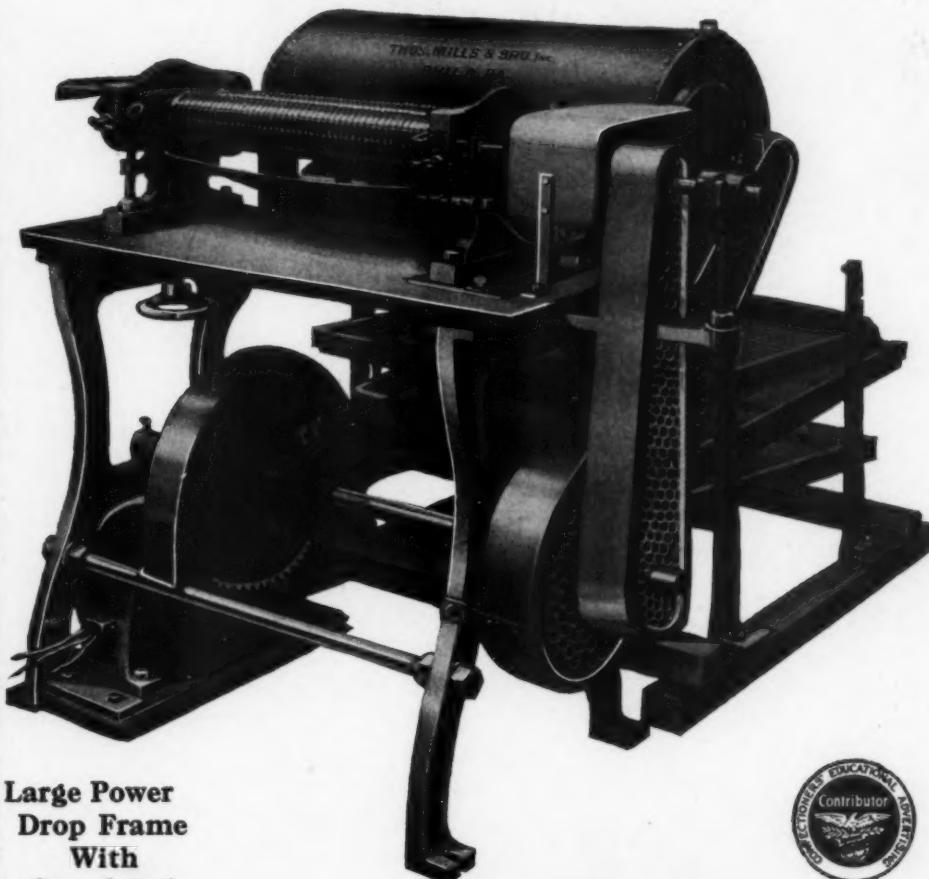
RACINE CONFECTIONERS' MACHINERY COMPANY
RACINE, WISCONSIN, U.S.A.

Thomas Mills & Bro., Inc.

1301 to 1315 North Eighth St.

Philadelphia, Pa.

ESTABLISHED 1864



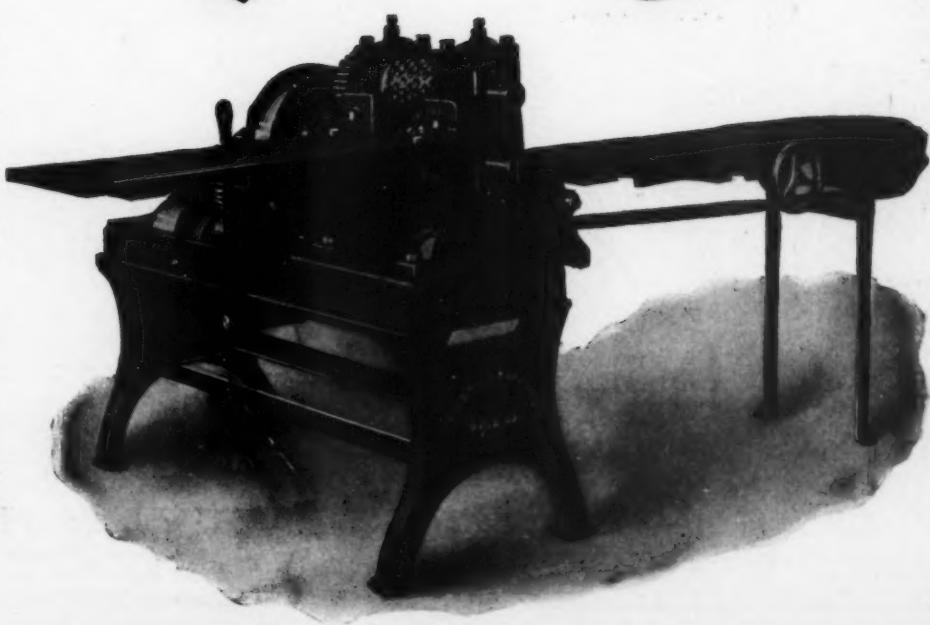
Large Power
Drop Frame
With
Stand and
Endless Belt
Conveyor
Attachments

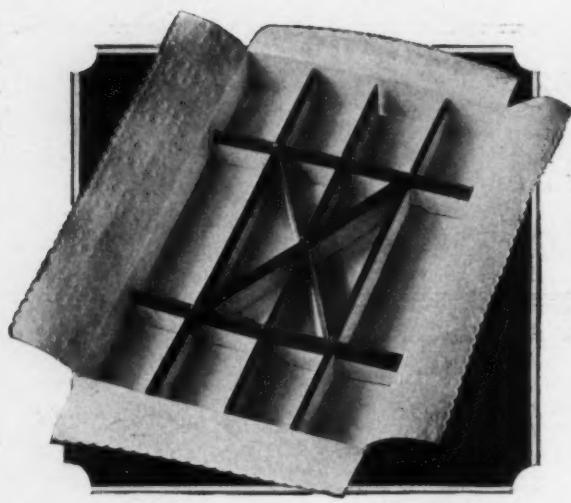
Used In All
The Largest
Factories
For
High Grade
Hard Candies

Our Catalog
of
Confectioners
Equipment
Sent on
Request

Patent
Automatic
Seamless
Hard Candy
Machine

Improve Your
Production
By
Installing
This
Labor Saving
Machine
Send for Special
Circular





Adding Charm to the Assortment • • • •

COLORED DIVIDERS

Enhance the sight appeal of your boxed assortments. Give your confections a background of charm that will put them above the range of the drab.

Colored Edged Dividers is just one way of injecting that winning touch of individuality that means so much in developing consumer acceptance.

Write us today . . . let us show you how to dress up your package as a cost that is surprisingly nominal.



Chocolate Dividers

A harmonizing divider of distinction that blends in with the rich brown of fine chocolates—a brown ensemble.

We carry in stock all kinds of layer cards, and we paraffine them as requested.

Watch this space each month for new ideas in candy packing.

Rapid Cutting Co., Inc.

SPECIALTIES OF

PAPER & CARDBOARD NOVELTIES

55-57 HAVEMEYER STREET

278-280-282-284 NORTH 6TH STREET

BROOKLYN, N. Y.



Your Copy is Waiting

THIS Catalogue in five colors displays the nineteen different designs made up in $\frac{1}{4}$ lb., $\frac{1}{2}$ lb. and 1 lb. sizes.

To the Candy Manufacturer, Wholesaler and Retailer, these boxes have been a most successful means of stimulating the sale of hard candy, at Christmas time, by including sixty empty boxes with a thirty pound pail.

To the Sunday School Supply houses, they have become a most profitable item of sales, by selling them at retail to Churches, Schools, Lodges and Charitable organizations for Christmas tree decorations.

*Order Early—Don't Delay
You'll Need Them Later Anyway*

COOPER PAPER BOX CORP., Buffalo, N.Y.

COOPER
FOLDING HOLIDAY
CANDY BOXES



*Appealing
to the Sweet-Tooth
Thru Cellophane*

Delicious looking candies like Woodward's in full view whet the appetite for sweets and cause many a passerby to stop and satisfy his suddenly aroused hunger.

With a 100% transparent Cellophane wrapper, a bar or package to suit the taste is singled out and another "impulse" sale is made.

Dealers give the best display to candies in Cellophane because they sell faster and stay clean in their transparent wrappers.

Let our Package Development Department work with you in creating attractive packages. Send samples for us to work with.

Du Pont Cellophane Co., Inc., 2 Park Avenue, New York City. Canadian Agents: Wm. B. Stewart & Sons, Limited, Toronto, Canada.



*Cellophane

A \$1,000,000,000 INDUSTRY IN 1933

New educational and advertising campaign counted on to put candy industry in billion dollar class

ONE billion dollars in 1933. That's the goal we have set. To reach it we are going to continue and greatly expand during the next three years, the present campaign which expires in March, 1930.

The Executive Committee has authorized raising a fund of \$500,000 each year for the next three years. This will care for a rapid practical execution of our program of "Bigger PROFITS From Better Merchandising." Plans for the next three years include the use of additional publications, expanding the work of the field representatives in building increased sales through better displays and merchandising, more sales clinics and conferences, increased activities in the schools, distribution and exhibition of the new educational film "Won By a Sweet," greater distribution of the booklet "The New Knowledge of Candy," and further development of the monthly merchandising service and local newspaper advertising for retailers and dealers.

Subscriptions are being made by Candy Manufacturers, Jobbers, Retailers and others in the industry on the basis of 1/10 of one percent of their yearly gross sales. This is at the rate of \$100 each year or \$300 for three years on every \$100,000 of annual gross business. Pledges are for three years—one third payable annually.

Splendid support is being given by Jobbers, Retailers and all the Allied Industries. Many of the latter have shown quite as much interest in the campaign as the candy manufacturers themselves.

The industry is even more anxious and ready to carry on this cooperative campaign now, than when it was begun. Results during the last three years have been eminently satisfactory while the million dollar investment already made in the campaign needs protection.

Already there has been splendid response to the first appeal for pledges. Those who have not already made their subscriptions are expected to do so within a few days. A quick response prevents any interruption of the many advertising and educational activities.

Pledge blanks will be found in the back of the campaign booklet "Building the Candy Industry," which should have reached you recently. The amounts subscribed on these blanks will naturally be kept confidential.

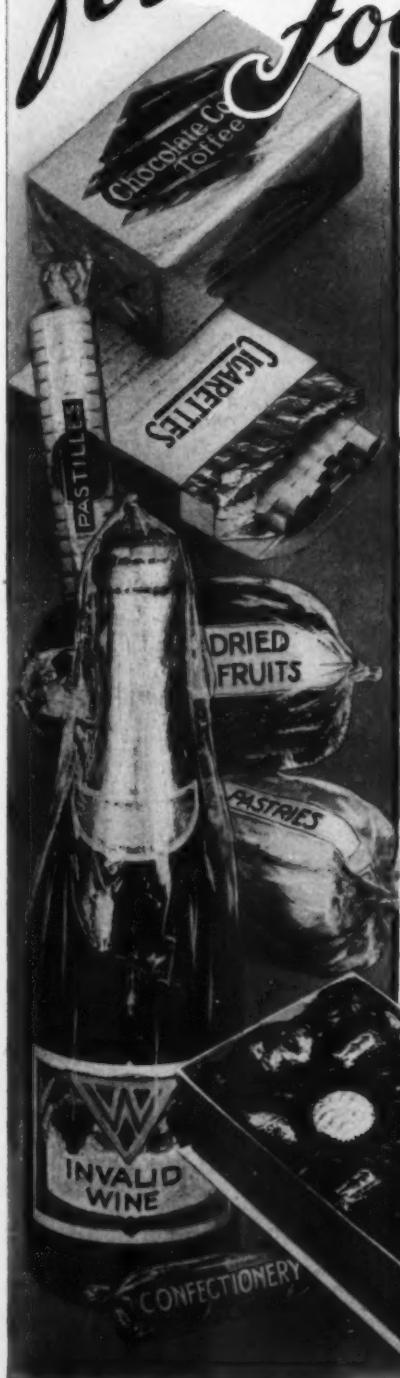
If you have not already received your copy of "Building the Candy Industry," write for it now. Your cooperation is needed.

NATIONAL CONFECTIONERS' ASSOCIATION
180 West Washington Street, Chicago



FISHER'S FOILS

for Foodstuffs etc.



FISHER'S PACKING MACHINES

All foods should be hygienically packed to insure against moisture and contamination.

Our packing machines will fulfill these conditions without goods being handled. Transparent paper, glacine, foil, etc., can be used for packing.

PATENTED ALL OVER THE WORLD

ALUMINUM & TIN FOILS

PLAIN or EMBOSSED, SOFT and PLIABLE

Interleaved or backed with tissue paper, waxed paper, or any other paper, attached with gummed lines. Embossed with name or special design in any colour or pattern.

Our Range of Designs Is Unequalled

Prompt attention is given to the production of Special Designs and Customers' own Foils.

ALL DESIGNS CAN BE SUPPLIED
EITHER IN ALUMINUM OR TIN

CAPSULES AND CONES

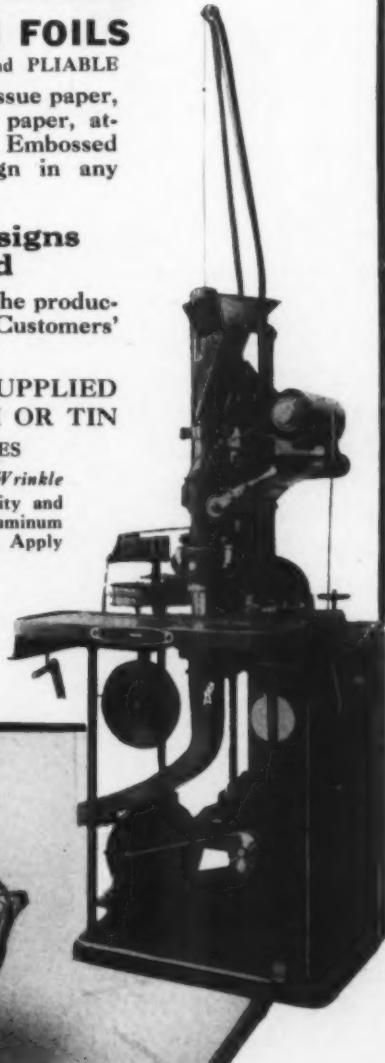
Our transparent Transifoil does not Wrinkle

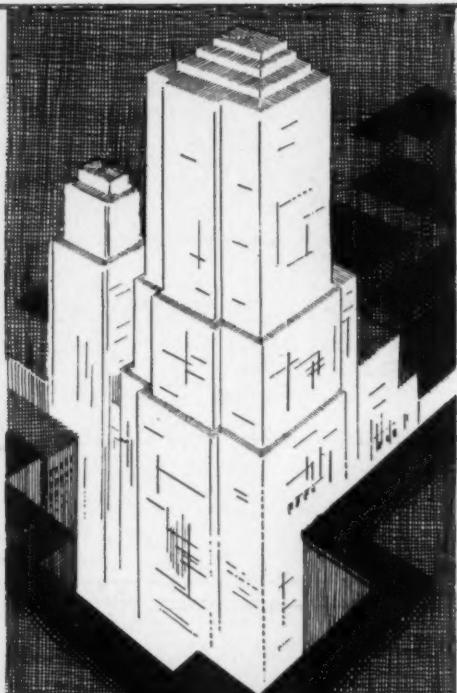
All our foils are of Superior Quality and finish. Large stocks of Tin and Aluminum Foils kept at Wembley Warehouse. Apply for samples and lowest prices.

FISHER'S FOILS, LTD.
Wembley - England

Telephone: Wembley 2008

Telegrams: Liofnit, Wembley





BRAND NAMES
Brand names have substantial property value which it is important to protect and owners of them are sure to prosecute any infringement.
It is unsafe to create or use any trade name without an exhaustive search of every registered and unregistered trade mark in existence.
Consult our Trade Mark Bureau. The service is free.

The MODERN TREND in DESIGN ..

Styles in packages, like styles in architecture, are constantly changing. "U. S." Labels and folding boxes keep up with the modern trend.

There is no problem in merchandising more vital than proper packaging. "U. S." salesmen are experts on all phases of this subject.

Let us be your package counsellors.

The UNITED STATES PRINTING & LITHOGRAPH CO.

CINCINNATI
65 Beech St.

BROOKLYN
103 N. 3rd St.

BALTIMORE
27 Cross St.

Color Printing Headquarters



CANDY BOX MATS, LACES,
LAYER CARDS, DIVIDERS, ETC.

American
Bon Bon
Cups

America's Standard
Candy Cup

Once tried
always used



AMERICAN LACE PAPER CO.
LARGEST PRODUCERS OF CANDY CUPS IN AMERICA

MILWAUKEE, WIS.
BRANCH OFFICES IN
PRINCIPAL CITIES



WE TAKE this occasion to wish our many friends and customers—and our customers are our friends—A Happy and Prosperous New Year for 1930, to thank them for their patronage and their high regard for Quality.

We will do our part to further the progress and healthy growth of the candy industry by continuing to make only High-Grade Quality Coatings—the kind that ever satisfy the user and consumer alike. A fact worth emphasizing is that "candy is known by the quality of its coatings."

MERCKENS CHOCOLATE CO., Inc.

7th and Jersey Streets
BUFFALO

LOS ANGELES
412 W. Sixth St.

BOSTON
90 Washington Street, N.

HANDLER & MERCKENS, Inc.
180 West Washington St. CHICAGO

NEW YORK
25 West Broadway



In time of cool weather—prepare for hot weather. Next summer will be too late to safeguard your factory against the ravages of heat—spoilage, loss and low quality production, delayed deliveries, etc. Consider the saving in time and trouble that can be assured by installing a dependable automatic Coolairco System now.

Consider The Advantages
Of Installing One Of The

COOLAIRCO
COOLING AND
Made ~ To ~ Order ~ Climate
AIR CONDITIONING
SYSTEMS

during the winter season when the work can be done in a logical manner so as not to interfere with production.

Let our capable, experienced engineers prepare a preliminary analysis of your air conditioning requirements now. This need place you under no obligation.

Only a "COOLAIRCO SYSTEM" can give you "Made-To-Order-Climate"

THE COOLING & AIR CONDITIONING CORP.
11 West 42nd Street, NEW YORK, N. Y.



ESSENTIAL OILS and Kindred Products

CONFECTIONERS' FLAVORS

also

OIL PEPPERMINT, "PRISMENTHA"

—Our own redistillation, U. S. P., a fine product.

OIL PEPPERMINT "SUPERMINTHA"

—Our own multiple rectification with the "harsh" sections of the natural oil eliminated, imparting a smooth and rich peppermint flavor to confections.

OIL ORANGE, OIL LIME, OIL LEMON—Finest qualities at lowest market prices. Prompt and future shipment.

OIL ALMOND—Bitter.

OIL SWEET BIRCH, U. S. P.

OIL WINTERGREEN ARTIFICIAL.

OIL CLOCE, OIL CASSIE, U. S. P.

VANILLA—all kinds.

VANILLIN COUMARIN

DODGE AND OLcott COMPANY

87 Fulton Street New York City

"The integrity of the house is reflected in the quality of its products."

CLINTON

CORN SYRUP
CORN STARCHES
CORN SUGAR REFINED

All CLINTON products are made under the most exacting conditions of factory and laboratory control. This insures uniformity in the finished products which are always of the highest quality. Use CLINTON Corn Syrup and CLINTON Corn Starches in the manufacture of highest quality candies.

Manufactured By



CLINTON CORN SYRUP REFINING COMPANY

CLINTON, IOWA

SPRECKELS

the largest
Sugar Refinery
in the East

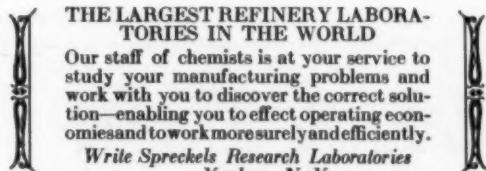


To Serve You Even Better

Constantly increasing demand for Spreckels Sugar is the reason for our still further increasing our refinery facilities.

Though already the largest refinery in the East, we have arranged to add 300 feet of land along the New York Central Railroad tracks at Yonkers. Building will be started immediately.

We are doing this to serve you—to be able at a moment's notice to ship you any amount and assortment of sugar you desire.



THE LARGEST REFINERY LABORATORIES IN THE WORLD

Our staff of chemists is at your service to study your manufacturing problems and work with you to discover the correct solution—enabling you to effect operating economies and to work more surely and efficiently.

Write Spreckels Research Laboratories
Yonkers, N. Y.

Spreckels Sugar



Will You Try Black Walnut Flavor (IMITATION) At OUR Expense?

MORE manufacturers of candy should know and use this flavor. While it may be new to you, it is not an untried product and many confectioners attest its trade building qualities.

No matter what you are making—Bon Bons, Bars, Kisses, Hard Candy, Gum Work or Specialties—it will pay you to vary your mixtures with something new and different. A few Walnut flavored pieces will be so outstanding that your trade will be quick to appreciate them.

This is not an idle claim. It is prompted by our experience with candy manufacturers in widely separated States who have been using Black Walnut for some time. Their orders for it are constantly increasing.

Do not confuse our Black Walnut with ordinary flavor. Ours is a highly concentrated product developed in our own factories from first grade, laboratory tested, raw materials carefully processed. The finished product is aged for a considerable period.

In this way we produce a flavor which imitates unmistakably the rich mellow taste of ripe nuts—a flavor which in most sections of the country has made a "big hit" and continues a decided favorite.

The weight of our 75 years of reputation is behind these statements, yet we do not want you to take our word alone. We urge you to

LOOK INTO IT

for here is a flavor that actually sells itself. By far the greater number of manufacturers using it today purchased it originally from sample alone. There was no personal solicitation and no urging. Why don't you try it?

Simply write on your business stationery and we will send you a generous working sample without cost and without obligation.

ALEX. FRIES & BRO.

Established 75 years

316 E. Second Street

Cincinnati, Ohio





1930

THE Holiday rush is over and now is the time to revise your present formulas or develop new pieces for the coming year. New pieces or improvements in the quality of your standard lines will help to stimulate sales for 1930.

Our Service staff is always ready to assist our customers through advice and suggestions in planning new pieces or improving their present lines. Our candy makers and chemists are experienced in candy development work and have served hundreds of our customers during the past year.

Nulomoline is being used to add and retain goodness in many of the most popular lines of candy.

Nulomoline controls graining, drying and fermentation—it also imparts sweetness and holds tenderness.

We will be pleased to tell you how and why Nulomoline can be used to improve your lines. Write us.

THE NULOMOLINE COMPANY
109-111 Wall Street, New York, N. Y.



**SEE WHAT
YOU BUY
BUY IN GLASS**

H. J. MELVILLE
2738 PINE GROVE AVENUE
CHICAGO, ILL.

Consulting Engineer
Serving the Manufacturing Confectioner

Factory Layout and Processes
Cost Reducing Methods
Special Machine Design

KALBE GELATIN
now supplied in the UNITED STATES by
HEICKE GELATIN WORKS, Inc.

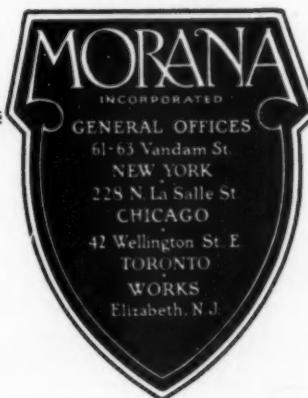
11 West 42nd Street

New York City

*If you're buying Vanillin
at more than \$5.00 per lb.,
it will pay you
to investigate
Bourbonal!*

van Ameringen-Haebler, Inc.

Successors to



OUR competitors may equal Walter Baker's new low prices, but they can't equal Walter Baker quality at those prices. Our salesman covering your territory has an interesting story to tell you about our new coatings. He will call on request.

WALTER BAKER & CO., Inc.
DORCHESTER, MASS.

MONTREAL, CANADA

Pacific Coast Representative:

MAILLARD & SCHMIEDELL

New variety—a coating for every purpose—uniformity always

HOLIDAY NOVELTIES

Here they are—all ready to greet your customers with the season's best! A jolly aggregation of Bunnies, Ducks, Dogs and other novelties to brighten up your displays—to win new customers.



HONEY
P2—16 in.

SONNY
P1—11½ in.

Imagine the captivating appeal of a Gay Bunny made of brightly colored plush tied atop a box of your choice assortments. Not only do they sell the candy but there is a nice profit on the bunny, too. Write for literature samples and prices.

GAY STUFFED TOY
& NOVELTY CO.,
260 Stone Ave., Brooklyn, N. Y.



BIG BUNNY
P3—21 in.

The New NATIONAL Product**BRILLIANT BLUE F C F**

is now available to the trade, having been approved by the Department of Agriculture as a Certified Food Color.

Rich blends of green, violet, purple, brown—
formerly unobtainable with green primary colors—
Delicate pastel tints—
Can now be produced with this new brilliant blue.

BRILLIANT BLUE F C F
Fast — Acid-Resistant — Permanent

National Aniline & Chemical Company, Inc.

40 Rector Street

New York

BOSTON

CHICAGO

PHILADELPHIA

PROVIDENCE

CHARLOTTE

SAN FRANCISCO

TORONTO



ESTABLISHED 1903

YIELD — LIGHTNESS — KEEP
can be controlled in making marshmallows
with "4 Star Brand" plus Dr. Duecker's
methods. A fair trial will tell the story.

Branch Warehouses:
 New York St. Louis Los Angeles
 Philadelphia Atlanta San Francisco
 Cleveland Houston Portland, Ore.
 Chicago Dallas Seattle

ESSEX GELATINE CO.

40 No. Market Street Boston, Mass.

Plant:
Peabody, Mass.
U. S. A.

GUM TRAGACANTH VANILLA BEANS GUM ARABIC

THURSTON & BRAIDICH
27 CLIFF STREET
NEW YORK

GE LATINE

*is an important
ingredient
in determining
marshmallow quality*

—and repeat orders. Atlantic Gelatine insures uniformity. You set the standard of your gelatine requirements —we maintain it.

ATLANTIC GELATINE COMPANY
Woburn, Mass.

Chicago: Room 1204—173 W. Madison St.
New York: Room 92—1 Hudson St.
Manufacturers of
ATLANTIC GELATINE

ATLANTIC
GELATINE

GRADE FOR GRADE A BETTER GELATINE

the
modern
way to
caramel
quality



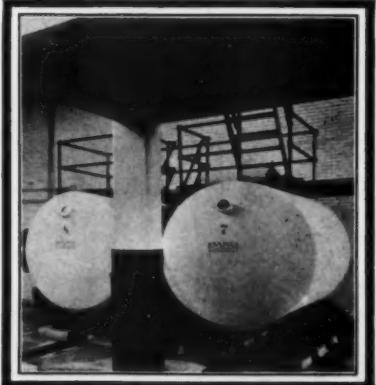
TRIAL KEG \$10
*M.B.I.N.S.

KAY-WHITE PRODUCTS^{NC}
156th & Barry Sts. New York City.

*Money Back If Not Satisfied

"U. S. Gel."

PURITY • UNIFORMITY • HIGH BEATING



"U. S. Gel." is particularly suited to making of marshmallows and other foams, due to its superiority and high beating properties. It is the finest product of its kind that can be made. Perfect control . . . double filtration . . . filtered drying air . . . and glass-lined pipes and storage tanks assure its absolute purity. "U. S. Gel." is produced in the most modern and completely equipped plant in the world.

Such benefits as these give the users of "U. S. Gel." a marked advantage. It can be used with confidence of knowing that candy made with "U. S. Gel." is finer for being chosen so wisely.

Let "U. S. Gel." prove its superiority in your own plant. Testing samples will be sent upon request. Mail the coupon today.

UNITED STATES GELATINE COMPANY
MILWAUKEE, WISCONSIN

Branches: New York Chicago Cincinnati Grand Rapids

UNITED STATES GELATINE CO., Milwaukee, Wis.

Gentlemen: Please send us samples of "U. S. Gel." for testing purposes.

It is to be used in connection with.

(fill in type of product)

Name of Company.....

Address.....

City.....

State.....



BALTIMORE—Md.
C. E. Riddle, Emerson Tower Bldg.
BIRMINGHAM—Ala.
Meyer-Blanke Co., 1608 First Ave. N.
BOSTON—Mass.
H. A. Johnson Co., 221 State St.
CHICAGO—Ill.
Frank Z. Woods, 180 N. Wacker Drive
J. W. Allen & Co., 116 N. Peoria St.
DALLAS—Tex.
Meyer-Blanke Co., 316 N. Preston St.
DENVER—Colo.
J. F. Merridith, 2240 Forest St.
HOUSTON—Tex.
Meyer-Blanke Co., 3115 Polk Ave.
KANSAS CITY—Mo.
Meyer-Blanke Co., 1311 W. 13th St.
MILWAUKEE—Wis.
J. D. Goldschmidt Co.,
288 East Water St.
OKLAHOMA CITY—Okla.
Meyer-Blanke Co.,
300 East First St.
OMAHA—Neb.
E. W. Arthur
& Co., 800
Arthur
Bldg.

DISTRIBUTORS
ST. LOUIS—Mo.
Meyer-Blanke Co., 410 Valentine St.
ST. PAUL—Minn.
O'Brien & Bushnell,
2694 University Ave.
SAN FRANCISCO—Calif.
Paramount Food Products
Corp., 570 Folsom St.
(Sole Distributors for
Pacific Coast)
CANADA—
Bowes Co.,
Ltd.,
Toronto

DELFT

GELATINE

Guaranteed
Purity—Uniformity
Quick Solubility
Good Volume—No Sagging

DELFT GELATINE WORKS, 160 Broadway, New York

*An
Analysis
with each
Delivery*



- 1—**EGG O CREME** for those creamy flowing centers with a quality appeal.
- 2—**X-L CREAM CARAMEL PASTE** with a richness of flavor true to its name. **Senneff's XL Cream Caramel Paste** contains a large percentage of real, pure sweet, rich cream—It adds a delightful flavor so essential to good caramels—guaranteed not to turn rancid, sour or curdle.
- 3—**NOUGAT WHIP**—It will go farther, make fluffier candy and hold moisture better than any product on the market that is being used for same corresponding purposes.

SENNEFF'S

Specialties for Quality Candies

Let us send you formulas and practical information on developing candies of character

Free

SENNEFF HERR CO.,
Sterling, Illinois.
Send copy of your Candy Makers' Guide containing practical formulas—no obligation.

Name

Per

Address

EVERY DROP FLAVORS — EVERY DROP FLAVORS — EVERY DROP FLAVORS

Quality Flavors

Assure READY SALES and the CALL for MORE

Outstanding among our extensive line of Confectioners' Flavors are:

Concentrated Imitation Grape Flavor Special

(The Premier Concord Grape Flavor)

Concentrated Imitation Raspberry Flavor Special

(Like fresh red Raspberries)

Concentrated Root Beer Flavor Special

(Refreshing in candy kisses as the world's famous beverage)

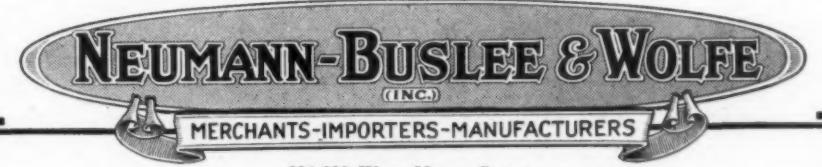
Concentrated Ko Ko Nut Flavor

(The surprise Flavor in fudges and cream centers)

(Makes a wonderful blend with Vanilla)

EVERY DROP FLAVORS

EVERY DROP FLAVORS



224-230 West Huron Street
CHICAGO

EVERY DROP FLAVORS — EVERY DROP FLAVORS — EVERY DROP FLAVORS

There is no SUBSTITUTE

for the enzyme that is responsible for the softening action of Convertit.

The consumer considers a cream center "fresh" so long as it remains soft.

Chocolate coated creams containing Convertit remained soft after being stored in our Laboratories under ordinary room temperature for a period of twenty-one months. You can put this same lasting quality into your goods by the use of Convertit.

Convertit in addition to its softening action, reduces losses resulting from mashing, crusting, drying and fermentation.

Convertit is simple to use—our booklet gives all the practical details.

Write for it.

THE NULOMOLINE COMPANY

Exclusive Distributors of Convertit

109-111 WALL STREET • NEW YORK, N. Y.

CONVERTIT

The highly concentrated invertase of standardized activity





Greater Palatability

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A pure fruit extraction, containing all the aromatic and flavoring constituents of the fresh, ripe fruit.

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And each mould embodying craftsmanship and pride in the creation that insures a perfect reproduction of the original design and the individuality of your piece.

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For Cooking *Sugar* Hard Candy



Batches from 25 to 200 lbs. can be cooked with the steam-operated Simplex and, like the gas cooker, each batch is ready to work as soon as it is poured—a distinct characteristic of the Simplex. No waiting and handling while cooling on slabs—no greasing of slabs—less waste and scrap salvage—less shrinkage. Capacity 2,500 to 5,000 pounds per day.

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The Simplex Production Unit

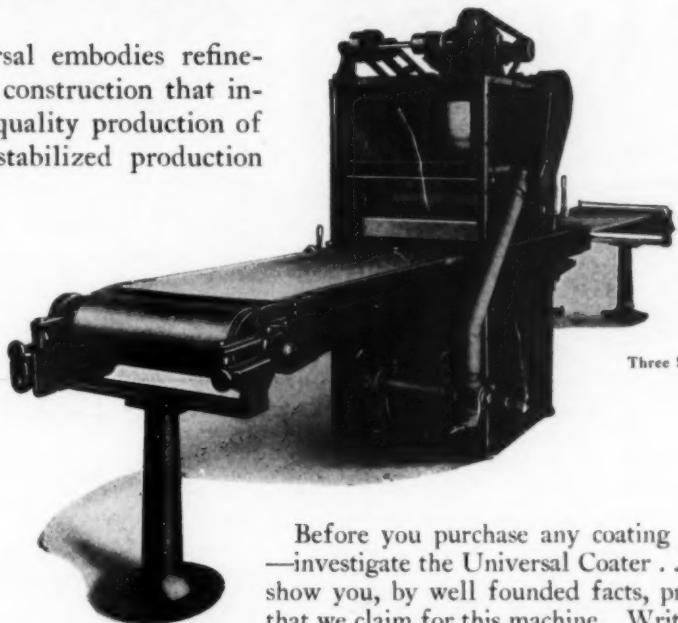
The Simplex Production Unit, consisting of one steam cooker and two or more pre-melting kettles, gives you an equipment capable of producing 5,000 pounds of high-grade candy per day. Ask us to tell you more about it. This is real quantity production with a maintenance of high quality at minimum cost.

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The 1930 Universal embodies refinements of design and construction that insure a continuity of quality production of coating that means stabilized production costs.



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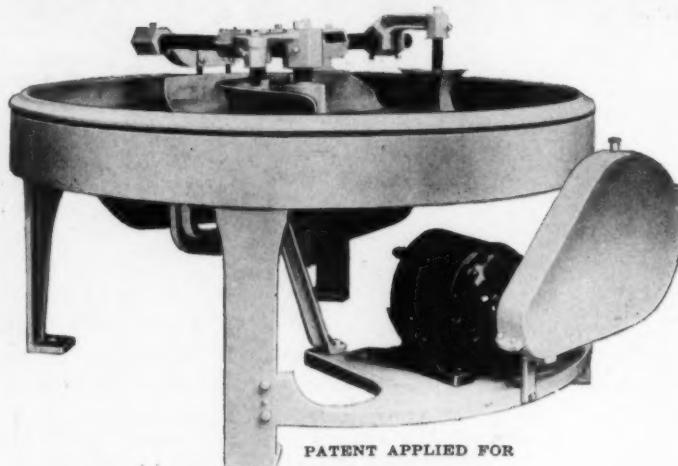
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THE most efficient and latest improved beater on the market. They make a smooth white cream of the whitest quality. Excellent for hand-roll creams—none better.

Power and long service.—Their simple, sturdy construction insures many years of satisfactory service. The bevel gear drive has a five to one ratio compounded with silent chain drive with five to one ratio which makes them very powerful. This drive will run for years and requires no attention whatever. All working parts in full view and can be inspected at any time. Nothing enclosed.

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Makers of Cream Beaters Since 1899

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BARS, CAKES, FANCY PIECES
Double Molds for Hollow Figures
PANS—LARGE and SMALL

EPPELSHEIMER & CO.

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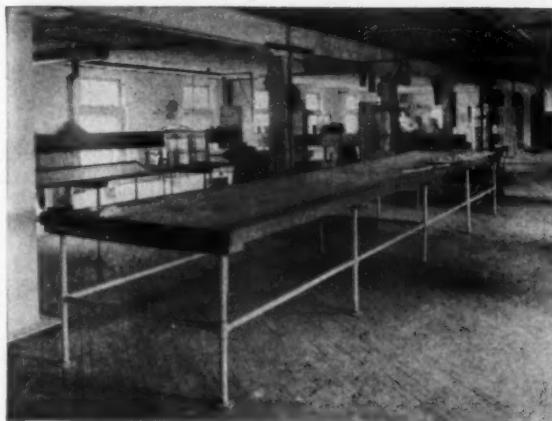
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Grown right along with you candy folks.

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Starch molding requires absolute cleanliness

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There is one of our Service Men near you. Write us and ask to have him call with more complete information. No obligation.

Manufactured only by

OAKITE PRODUCTS, INC., 36C Thames St., NEW YORK, N.Y.

Oakite Service Men, cleaning specialists, are located at

Albany, N. Y.; Allentown, Pa.; Atlanta; Altoona, Pa.; Baltimore; Battle Creek, Mich.; Boston; Bridgeport; Brooklyn, N. Y.; Buffalo; Camden, N. J.; Charlotte, N. C.; Chattanooga, Tenn.; Chicago; Cincinnati; Cleveland; Columbus, O.; Dallas; Davenport; Dayton, O.; Decatur, Ill.; Denver; Des Moines; Detroit; Erie, Pa.; Fall River, Mass.; Flint, Mich.; Fresno, Cal.; Grand Rapids, Mich.; Harrisburg, Pa.; Hartford; Houston, Texas; Indianapolis; Jacksonville, Fla.; Kansas City, Mo.; Los Angeles; Louisville, Ky.; Madison, Wis.; Memphis, Tenn.; Milwaukee; Minneapolis; Mobile, Ill.; Montreal; Newark, N. J.; Newburgh, N. J.; New Haven; New York; Omaha, Neb.; Oakland, Cal.; Oklahoma City, Okla.; Oshkosh, Wis.; Philadelphia, Pa.; Phoenix, Ariz.; Pittsburgh; Pleasantville, N. Y.; Portland, Me.; Portland, Ore.; Poughkeepsie, N. Y.; Providence; Reading, Pa.; Richmond, Va.; Rochester, N. Y.; Rockford, Ill.; Rock Island; Sacramento; San Francisco; Seattle; South Bend, Ind.; Springfield, Mass.; St. Louis; St. Paul; Syracuse, N. Y.; Toledo; Toronto; Trenton; Tulsa, Okla.; Utica, N. Y.; Vancouver, B. C.; Wichita, Kan.; Williamsport, Pa.; Worcester, Mass.

Stocks of Oakite Materials are carried in these cities.

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Industrial Cleaning Materials and Methods

UNINTERRUPTED PRODUCTION WHEN YOU USE QUALITY SCALES

EVERY time one of your scales break down, it means loss of production and profits.

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Staunchly built but with the utmost simplicity, (only 2 moving parts) Detecto-gram performs faithfully and withstands long years of uninterrupted service.

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MACHINERY FOR SALE

FOR SALE—NO. 2 RACINE cream beater and four hundred pound cooler, direct connected, Racine caramel cutter and sizes, belt driven. These machines are practically new at a reasonable price. Brux Candy Co., 2nd and Locust St., Newark, Ohio.

FOR SALE—ONE PRACTICALLY new 75-ton Carrier Engineering Company Refrigerating Machine. Will be sold at a very low price. Apply Luden's, Inc., Reading, Pa.

STARCH BUCK—POWER DRIVEN, 200-tray capacity, in excellent condition. We need the space. Offering at a very attractive price. C. E. McCarron, South & Depot Sts., Cincinnati, Ohio.

FOR SALE—ONE GAS VACUUM cooker. Address Close & Co., 312 N. May St., Chicago, Ill.

FOR SALE—ELECTRIC CHOCOLATE DIPPING TABLES, Metal Chocolate Dipping Trays, Marshmallow Beater, at a reasonable price. Address Gurley Candy Co., Minneapolis, Minn.

FOR SALE—LOZENGE OUTFIT complete with Lozenge Mixers, reversible heavy Sizing Machine, series of graduated sizes and lozenge press, complete with ten sets of dies. Cheap price for quick sale. Address E-5325, % Manufacturing Confectioner, 30 North La Salle St., Chicago, Ill.

FOR SALE—AT A BARGAIN, some Wright & Graham Ribbonzene, different colors; No. 2 Silk Ribbons and some No. 5. Prices and samples sent upon request. Green Bros. Co., 33 Essex St., Springfield, Mass.

FOR SALE—2000 LBS. OF 3 1/4 BY 3 1/4 inch square aluminum cut foil for assorted chocolates, assorted colors. Also 2500 lbs. of 2 1/4 inch wide aluminum foil in rolls. Above foil in original cases. Attractive price for quick sale. Union Confectionery Machinery Co., 318 Lafayette St., New York City.

MACHINERY FOR SALE

SURPLUS EQUIPMENT — 1 DI-
agraph (St. Louis) dial stencil
machine, 1/2 in. letters, good
condition, \$25.00. 1 5 h.p. General
Electric Motor, 1800 r.p.m., 60 cycle, 110
volt, Form C. G., serial No. 453595,
\$50.00. 1 Snyder handroll machine
with 100 trays, excellent condition.
\$150.00. 1,000 200-hole (Brewer
make) sales boards, 10c each. 1,500
700-hole (Brewer make) sales
boards, 15c each. 1 National Equipment
Co. depositor, with or without
pump. Address The Wm. C. Johnson
Candy Co., South St. at State
Ave., Cincinnati, Ohio.

FOR SALE—3 TON YORK ICE machine with coils 2 7/8 h.p. motors, 1 4-ft. ball cream beater, 1 nougat cutter, 1 Racine caramel cutter, 12 frames for square suckers including patent for same, 4 steel candy coolers. Address W-6433, % The Manufacturing Confectioner Publishing Co., 30 N. La Salle St., Chicago, Ill.

FOR SALE—NEW COPPER steam jacketed Draw-off Kettles and Mixers, twelve sizes, 15 to 500 gallon, always in stock, all extra heavy and tested 225 pounds pressure. Buy new kettles that carry a responsible manufacturer's guarantee. HAMILTON COPPER & BRASS WORKS, HAMILTON, OHIO, Kettle Mfrs. Est. 1876.

FOR SALE—STEEL MOGUL MACHINE, complete with 20 and 24 outlet pump bars, guaranteed perfect condition. Will sell cheap for quick sale. Address C-3310, care The Manufacturing Confectioner Pub. Co., 30 N. La Salle St., Chicago, Ill.

BARGAINS: YORK BATCH Roller, Champion Pulling Machine, factory size. Model F Friend Hand Rolled Machine. 8-inch and 24-inch Chocolate Coaters. Racine Starch Buck. Force Draft Cookers. Simplex Vacuum Cooker. National Marshmallow Beaters. Model K Kiss wrapper, and many other items. Prompt deliveries. National Confectioners Machinery, 108 E. Second St., Cincinnati, Ohio.

MACHINERY FOR SALE.

FOR SALE VERY CHEAP,
cash, time or trade. Guaranteed
candy machinery, continuous cooker
kettles, revolving pans, etc., etc. Ad-
dress Box No. S 6407, % The Man-
ufacturing Confectioner, 30 N. La
Salle St., Chicago, Ill.

FOR SALE—CHEAP—TWO 16"
Enrobers, with automatic feeders,
bottomers, and strokers. Will sell
with or without attachments. Ad-
dress C-3308, care The Manufacturing
Confectioner Pub. Co., 30 N. La
Salle St., Chicago, Ill.

FOR SALE—RACINE IMPROVED Automatic Sucker Machine, latest type, dumbbell, and two for five cent and one cent round rollers. Address D-4320, The Manufacturing Confectioner, 30 N. La Salle St., Chicago, Ill.

THREE 16-INCH ENROBERS,
\$200 each. Bottomer, \$125. Auto-
matic shaker, \$25. Address U-6417,
care The Manufacturing Confectioner
Pub. Co., 30 N. LaSalle St., Chicago,
Ill.

MACHINERY WANTED

WANTED—RACINE MODEL M
dye pop sucker machine. Must be
in first class condition. Give serial
number, how old, and submit sample
of pop made on machine. Best cash
price. Address ZA-632, % The Man-
ufacturing Confectioner Publishing
Co., 30 N. La Salle St., Chicago, Ill.

WANTED—YORK BATCH
roller. The W. C. Nevin Candy
Co., Denver, Colo.

WANTED: USED CANDY EQUIPMENT, including Simplex Cookers. Ideal Caramel Machine, National Enrober, Ball Beaters, Model "K" Kiss Machines, Water Cooled Slabs and other reliable used candy equipment. State serial numbers and condition. Must be priced low for quick cash deal. Address V-6424, % The Manufacturing Confectioner Pub. Co., 30 N. La Salle St., Chicago, Ill.



THE MANUFACTURING CONFECTIONER'S CLEARING HOUSE

MACHINERY WANTED

MACHINERY WANTED — TWO
model K kiss cutting and wrapping machines. Give serial numbers, condition and price. Will pay cash. Address P-6389, % The Manufacturing Confectioner Publishing Co., 30 N. La Salle St., Chicago, Ill.

POSITIONS WANTED

SUPERINTENDENT WILL BE
open for a position Jan. 1st in a general line factory. I am a practical man, good organizer and will furnish reference. Address W-6437, % The Manufacturing Confectioner Publishing Co., 30 N. La Salle St., Chicago, Ill.

ALL AROUND CANDY MAKER
and foreman desires position in a small factory; 25 years' experience and can furnish best of reference. Can operate enrobers. Address U-6421, % The Manufacturing Confectioner Publishing Co., 30 N. La Salle St., Chicago, Ill.

POSITION WANTED BY AN
all-around candymaker and enrober operator. Address W-6435, % The Manufacturing Confectioner Publishing Co., 30 N. La Salle St., Chicago, Ill.

MANUFACTURERS' AGENT, AN
aggressive and able salesman, wishes to secure for New York City and adjacent territory exclusive contract to sell a line of machinery suitable for the manufacturing retail confectioner and soda fountain owners. Ten years in this district for a nationally known firm. H. M., 71-25 Roosevelt Ave., Jackson Heights, L. I., N. Y.

SITUATION WANTED AS
working foreman or superintendent. Understand all modern machinery, including chocolate enrober, hard candy, creams, nougat, fudges, caramels, marshmallows and jellies. Can furnish the best of references. Can figure cost and handle help to advantage. Address V-6431, % The Manufacturing Confectioner Pub. Co., 30 N. La Salle St., Chicago, Ill.

POSITIONS WANTED

CREAM MAN WANTED FOR
high-class chocolate creams for factory in Canada, state experience, where previously employed, salary wanted and references. Address Vaillancourt, Ltd., 1691 Dorion Street, Montreal, Canada.

HELP WANTED.

HELP WANTED — MALE, CANDY
maker for large factory. Must be experienced and capable of making caramel pastes and nougat cremes. Ideal working conditions. Steady position. Give full particulars of past experience with references. Address W-6436, % The Manufacturing Confectioner Publishing Co., 30 N. La Salle St., Chicago, Ill.

SALESMAN WANTED.

AN OPPORTUNITY FOR A
capable, ambitious young man with selling experience, preferably to manufacturing confectioners in Chicago. Qualifications: Gentle, single, one who owns a car to work the city and suburbs, must give references with application. Moderate salary. A real opportunity to connect with a well-known chocolate coating manufacturer. Address V-6428, % The Manufacturing Confectioner Pub. Co., 30 N. LaSalle St., Chicago.

WE NEED A THOROUGHLY EXPERIENCED
salesman with a successful record to represent us in New York State as of January 1. Unusual opportunity on established line of bulk, packages and bars. We shall require your entire time. Brokers need not apply. All answers strictly confidential. Write, giving full details of previous positions, salary expected, etc. George C. Miller & Co., Inc., 923 Washington St., Boston, Mass.

SALESMEN AND BROKERS
wanted to sell jobbing trade unusual 5c pop corn specialty. Wonderful possibilities. Commission basis. State territory covered and lines carried. Address W-6434, % The Manufacturing Confectioner Publishing Co., 30 N. La Salle St., Chicago, Ill.

SALESMEN WANTED

SALESMEN WANTED BY
large manufacturers of flavoring products, salesmen calling on manufacturing confectioners. A very attractive commission for the right men. Immediate response requested. Address V-6429, % The Manufacturing Confectioner Pub. Co., 30 N. LaSalle St., Chicago, Ill.

OF INTEREST TO MACHINERY

SALESMEN —We are adding men to our sales force. If you are capable of selling new modern equipment for the manufacture of candy, also very latest generous commission basis, address type of wrapping machines on a V-6430, % The Manufacturing Confectioner Publishing Co., 30 N. La Salle St., Chicago.

MISCELLANEOUS

CONFECTIONERS — OHIO PROPOSITION
only one in town of 5,000. Washington shop priced at \$8,400. Candy business in Oregon has bottling plant in connection. One in Colorado mining town with no competition. Other select buys in good locations. Write National Brokerage Co., Omaha, Nebr.

CANDY BROKER WITH ESTABLISHED BUSINESS in Minnesota, northern Wisconsin, North Dakota and South Dakota wishes additional lines. Best of references from firms I am now representing. Address Lawrence Sugars, 1214 Harmon Place, Minneapolis, Minn.

FOR RENT — INDIVIDUAL CANDY
factory, brick building, 38 feet by 30 feet, two floors and basement. With or without equipment, located in Evanston, Illinois. Address W-6432, % The Manufacturing Confectioner Publishing Co., 30 N. La Salle St., Chicago, Ill.

NUTS FOR SALE — 1929 CROP
pecan meat halves with broken parts, 22 lb. tin, 50c per lb. Cracked pecans, 20c per lb. in 50 lb. box. 2 lb. Cracked Pecan, 2 lb. Pecan Meats, \$1.50. Send cashier's check or money order. Cash with order is the only way to sell pecan meats at bottom prices without the bottom falling out. Van Fleet Pecan Groves, Derry, La.

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